



# Revised Slope Stability Investigation Report

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**Amended Reclamation Plan for Cemex Black Mountain/White-Gray Mountain  
Quarry (CA Mine ID 91-36-0019 & 91-36-0106)  
Apple Valley area of San Bernardino County, California**

July 22, 2021 Revision: March 24, 2021  
Terracon Project No. CB205052

**Prepared for:**

Lilburn Corporation  
San Bernardino, California

**Prepared by:**

Terracon Consultants, Inc.  
Colton, California



March 24, 2021

Lilburn Corporation  
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Attn: Mr. Marty Derus – President  
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Re: Revised Slope Stability Investigation Report  
Amended Reclamation Plan for Cemex Black Mountain/White-Gray Mountain Quarry (CA  
Mine ID 91-36-0019 & 91-36-0106)  
Apple Valley area of San Bernardino County, California  
Terracon Project No. CB205052

Dear Mr. Derus:

We have completed the Revised Slope Stability Investigation services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PCB205052 dated April 23, 2020 and additional direction provided by you in electronic mail dated February 23, 2021. This revised report addresses reclamation plan changes to lower final bottom elevations in the Black Mountain pit and White-Gray Mountain future pit resulting in an increased overall project slope height. The general reclamation footprint is unchanged. This report presents the findings of the data review, geologic mapping, laboratory testing and structural evaluation, and provides recommendations concerning suitable slope angles and heights for reclamation consistent with Surface Mining and Reclamation Act (SMARA) requirements.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,  
**Terracon Consultants, Inc.**

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**Note:** This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the **GeoReport** logo will bring you back to this page. For more interactive features, please view your project online at [client.terracon.com](http://client.terracon.com).

## ATTACHMENTS

**SITE LOCATION MAP**  
**SITE MAP**  
**GEOLOGIC MAP AND SITE PLAN**  
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**Note:** Refer to each individual Attachment for a listing of contents.

## REPORT SUMMARY

Topic <sup>1</sup>	Overview Statement <sup>2</sup>
<b>Project Description</b>	<p>The site currently includes the Black Mountain (CA Mine ID 91-36-0019, 209 acres) limestone quarry and the White Mountain (CA Mine ID 91-36-0106, 142 acres) limestone and aggregate quarry. It is proposed to amend the reclamation plan to allow mining in the undisturbed areas contiguous to the two quarries. For purposes of this study, the area west of Black Mountain is referred to as the White-Gray Mountain area. The area south of the existing haul road is referred to as South of Haul Road. The amended reclamation plan would encompass one large quarry. The amended reclamation plan totals approximately 848 acres. We were provided with the boundary of the project but no amended reclamation plan was available at the time of this evaluation.</p> <p>Amended reclamation plan summary based on discussions with Lilburn Corporation and Cemex:</p> <ul style="list-style-type: none"> <li>■ Bottom quarry elevations for Black Mountain could be in the range of 2,700 feet.</li> <li>■ Bottom quarry elevations for the White-Gray Mountain area could be in the range of 3,000 feet.</li> <li>■ The area South of Haul Road may have elevations in the range of 3,400 feet.</li> <li>■ The quarry could have reclaimed rock slopes with a maximum height of approximately 1,100 feet.</li> <li>■ The overall slope angle would be between 45 and 51 degrees, using 50-foot high interbench faces with catch benches and 79- to 84-degree faces.</li> <li>■ The overburden stockpile is located in the White Mountain Quarry. The reclaimed overburden slope angles and heights have not been specified.</li> </ul>
<b>Existing Quarry</b>	<p>The amended reclamation plan occupies most of Black Mountain, a series of bedrock hilltops along the northeast side of the Helendale fault. Highest elevations are about 4,200 feet AMSL at the peak of Black Mountain, descending to about 3,400 AMSL in the alluvial area adjacent to the fault. Natural bedrock slopes are variable, generally as steep as 1.5(H) to 1(V) with flatter areas. Black Mountain Quarry slopes are generally in well-defined benches with overall inclinations of about 1(H):1(V). Tailings slopes at White Mountain are a few hundred feet high and appear to be near their angle of repose (slightly flatter than 1.5H to 1V).</p>
<b>Geologic Characterization</b>	<p>Cement-grade ore at the Black Mountain quarry is limestone-cobble conglomerate of the Jurassic Fairview Valley Formation derived from Paleozoic carbonate units. This deposit is folded into a syncline and bounded by faults.</p> <p>The White Mountain Quarry ore is calcite marble formed as northeast-trending, northwest-dipping metamorphosed Paleozoic limestones cut by intrusive dikes.</p> <p>It is proposed to produce aggregate from the Gray Mountain area and South of Haul Road area.</p>



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<b>Geologic Structure</b>	<p>Structural elements within Black Mountain Quarry include a northwest-trending syncline defined by southwest-dipping bedding on the northeast side and northeast-dipping bedding on the southwest side of the quarry, respectively. The syncline axis is cut by northeast-trending faults. Faults also form contacts between major limestone ore units of Black Mountain. A fault juxtaposes the ore body with quartzite along its northern reach.</p> <p>Structural features of White-Gray Mountain quarry include northwest-trending mafic intrusive dikes and northeast-trending, northwest-dipping bedding in the Paleozoic marble units. The ore body is underlain and intruded by monzonite/diorite. The ore body is bounded on the south by a northeast-striking fault.</p>
<b>Groundwater</b>	<p>The current depth to static groundwater is not known. Based on the arid site conditions and site geology, we consider it unlikely that a static water table exists at or above elevation 3,250 at the site. Groundwater conditions at completion of mining (reclamation stage) may include water seepage and ponding of limited extent; however, groundwater is not anticipated to significantly affect the stability of the proposed reclamation slopes. On that basis, our evaluation considered dry conditions in the slope stability calculations.</p>
<b>Kinematic Results</b>	<p>For the project reclamation area, the kinematic evaluation suggests:</p> <ul style="list-style-type: none"><li>n Low to moderate potential for planar failure</li><li>n Moderate to high potential for wedge failure</li><li>n Low to moderate potential for topple</li></ul>
<b>Global Stability Results</b>	<p>The global stability results yielded static factors of safety (FS) in excess of 1.5 and seismic factors of safety at or greater than 1.1, which are in conformance with Division of Mine Reclamation (DMR) criteria, for the range of scenario rock slopes.</p>
<b>Findings and Conclusions</b>	<p>The following range of slope heights/angles are considered feasible for reclamation:</p> <ul style="list-style-type: none"><li>n Rock materials (all scenario types) — overall slopes at 45° up to 1,100 feet in height configured with 50-foot tall, 79° faces and 40-foot-wide benches, 10-foot back break zone</li><li>n Rock materials (all scenario types) — overall slopes at 51° up to 1,100 feet in height configured with 50-foot tall, 84° faces and 35-foot-wide benches, 5-foot back break zone</li></ul> <p>Based on the results of our stability analyses, the rock slope configurations evaluated herein are considered stable under static and seismic conditions as reclaimed slopes. Inclusion of horizontal safety benches in final slope design is an effective protection from rockfall, will flatten the overall slope angles, will reduce tensional forces in surface rock, and will reduce surface erosion rates.</p> <p>Localized structures at the bench scale may form zones that require scaling and/or excavation to flatten or steepen face angles to achieve suitable reclamation conditions. In general, for hard rock mining in open pits, structural features such as contacts or faults that have the potential to create highwall-scale failures may be present in the subsurface. At such time and locations as reclamation slopes are excavated and additional geologic structure is exposed, a qualified professional from Terracon should examine the slope conditions to determine conformance with the reclamation plan.</p>

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	<p>Production blasting and/or mechanical excavation are suitable for developing mine slopes. However, when reclaimed slope faces are reached, blasting should be planned and controlled so that final catch benches are constructed in accordance with the approved reclamation plan and to avoid excess disturbance to finished surfaces. Degradation or clogging of catch benches can allow rockfall to reach lower mine levels.</p>
<b>General Comments</b>	<p>This section contains important information about the limitations of this slope stability report.</p>
<ol style="list-style-type: none"><li>1. If the reader is reviewing this report as a pdf, the topics above can be used to access the appropriate section of the report by simply clicking on the topic itself.</li><li>2. This summary is for convenience only. It should be used in conjunction with the entire report for design purposes.</li></ol>	

**Revised Slope Stability Investigation Report**  
**Amended Reclamation Plan for Cemex Black Mountain/White-Gray Mountain**  
**Quarry (CA Mine ID 91-36-0019 & 91-36-0106)**  
**Quarry Road Area**  
**Apple Valley area of San Bernardino County, California**  
**Terracon Project No. CB205052**  
**March 24, 2021**

## **INTRODUCTION**

This report presents the results of our slope stability investigation performed for the Cemex Black Mountain and White-Gray Mountain Quarry region located in the Apple Valley area of San Bernardino County, California. The Quarries are existing permitted mines that are proposed to be enlarged by mining adjacent areas. An amended reclamation plan was provided by Lilburn Corporation (Lilburn) to guide our investigation. The mines include Jurassic metasediments that are part of the Sidewinder Volcanics and Limestone and metasediments of the Fairview Valley Formation. The chief quarry products are now cement-grade limestone. Considerations for future mining include aggregate production from non-carbonate geologic units.

Our services included geologic mapping and data collection, collection of rock samples, and evaluation of kinematic and global slope stability for proposed rock slopes as outlined in our proposal dated April 23, 2020. Revisions to our report dated July 22, 2021 are provided herein to address changes to the reclamation plan that include lowering final pit elevations. The purpose of our evaluation was to characterize the anticipated stability conditions of proposed reclamation cut slopes of the future mining areas. Information from prior investigators and documents provided was also utilized for this evaluation.

The approximate location of the project area is shown on the attached [Site Location Map](#). The proposed amended reclamation area is shown on the attached [Site Map](#). The results of our evaluation, together with our conclusions and recommendations, are presented in this report.

## **SCOPE OF SERVICES**

We performed a slope stability investigation to address the proposed reclaimed slope configurations to be formed in the volcanic rock units of the Sidewinder Formation and sedimentary and carbonate units of the Fairview Valley Formation, and to provide recommendations for feasible stable slopes according to the Surface Mining and Reclamation Act (SMARA). Approximate slope configurations were discussed with Lilburn Corporation and Cemex prior to our investigation. Revised configurations were provided in February 2021 and are addressed in this report. We obtained unpublished field slips (mapping) from Mr. Howard Brown, as well as a pre-publication version of that map from the California Geological Survey. Aerial

photographs were examined. We utilized pertinent data from site reports and other investigations as appropriate.

We established the strength characteristics of rock materials based on our database of UCS tests and slope stability application-based utilities.

We performed kinematic evaluation of characteristic geologic structure using stereonet plots and screening criteria to identify potential for various failure modes.

We performed whole-slope global stability analyses of the tallest rock slope configurations (representative) for static and seismic conditions in the site geologic units. We modeled three rock unit types for and analyzed end-member slope configurations to establish a suite of feasible reclamation slope geometries.

The results of mapping and analysis, our findings of suitability of the feasible slope configurations, and recommendations for modifications of slope geometry, where warranted by analytical results, are presented in this report.

## **PRIOR INVESTIGATIONS**

Howard Brown mapped the Sidewinder Mountain and Black Mountain areas at a scale of 1-inch = 1 mile. We obtained an unpublished compilation of this data from Janis Hernandez of California Geologic Survey dated 2010/2011. The work was subsequently published by the Geological Society of America in 2017. We obtained the original field slips at 1:6,000 and the unpublished mapping by California Geological Survey (CGS). Brown indicated three major geologic units within the proposed reclamation area. These units include Jurassic Sidewinder Volcanics, a metasedimentary unit of the Fairview Valley Formation, and carbonate units of the Fairview Valley Formation. Fairview Valley Formation units are overlain by Sidewinder Volcanics with both units being separated by an intervening quartzite unit. Faulting associated with Sidewinder Volcanics occurred as a result of caldera collapse. Late Jurassic northwest trending dikes cut Fairview Valley Formation, quartzite, and Sidewinder Volcanics. Quartz monzonite plutonic intrusion occurred during Cretaceous time. Brown reports geologically-recent activity along the northwest-trending Helendale Fault located southwest of the project area.

Stone and others (2006) mapped the Black Mountain area that includes the amended reclamation area. The included mapping is more generalized than Dibblee but the work includes radiometric dating and an outline of the events reflected in the complicated geology at Black Mountain.

The nomenclature of geologic units designated by Howard Brown was adapted for this investigation. A **Geologic Map and Site Plan** using the mapping by Brown is attached.

The reclamation plan for White Mountain (dated 1984) specifies rock slopes at a 1(h) to 1(v) ratio (45-degree angle). An inspection report for White Mountain dated 2019 specifies rock slopes at a

1(h) to 1(v) (45-degree) angle with benches, fill slopes at 2(h) to 1(v) up to 400 feet in height with reference to a study by Morhol dated 2000. The Morhol study dated April 20, 2000 addresses fill slopes for White Mountain and stability of rock slopes in the Reserve area in the western portion of White Mountain. Morhol evaluated mine slopes up to 250 feet tall with 40-foot faces and 25-foot wide benches resulting in an overall angle of 60 degrees. Morhol used Mohr-Coulomb strengths that yielded factors of safety above 7 for static and seismic conditions.

The Black Mountain reclamation plan dated 1984 specifies rock slope angles at 1(h) to 1(v) with face heights from 35 to 55 feet and overall mine slopes at 45 degrees. An inspection report for Black Mountain dated 2018 specifies similar slope and benching configurations.

A slope stability report by TerraMins, Inc. dated 2010 addressed the potential for extended mining depths within the Black Mountain quarry. The report considers slope heights up to 1,000 feet, extending mining to the 2,700-foot elevation. The TerraMins report identifies the carbonate resource as occurring within a northwesterly-striking homocline (mapped since by Brown as a syncline) with bedding dipping steeply northeast. TerraMins identified several geologic structures that influence the bench configurations in Black Mountain including relict bedding, faults, and joints formed along or sub-parallel to relict bedding. TerraMins concluded that rock slopes at overall inclinations as steep as 55 degrees are stable by calculation for static conditions and seismic conditions with  $K_h = 0.15$ .

## **SITE DESCRIPTION**

The Black Mountain and White Mountain quarries are located in San Bernardino County, northwest of the Mojave Desert Town of Apple Valley. The Mojave Desert is dominated by broad alluviated basins that receive sediments from adjacent uplands that bury the older topography. Playa lakes (internally drained) are a common feature of the region including Fairview Valley to the south. The site is located in the uplands of Black Mountain, an area of moderate to steep slopes and moderate relief. Black Mountain is dominated by the Fairview Valley Formation and Sidewinder Volcanics series, which includes carbonate, metasedimentary and volcanic units of Jurassic age. The Fairview Valley Formation is overlain by and separated from the Sidewinder Volcanics by a quartzite unit. Granitic rocks of Triassic monzonite and Paleozoic marble units crop out locally southwest of White Mountain. A description of geologic units in the amended reclamation plan area is provided in a later section of this report. The project area includes the area of Black Mountain and White Mountain quarries, undisturbed terrain west of Black Mountain and an area of Sidewinder Volcanics located south of the main haul road south of White Mountain. The White-Gray Mountain future pit includes the area between and west of the Black Mountain and White Mountain pits.

## **Aerial Photograph Review**

Google Earth imagery dating from 1994 to 2018 shows the progression of mining in Black Mountain quarry from southeast to northwest. Activity visible at White Mountain is limited to fill placement the margins of which have changed little since 1994. Mining at Black Mountain has proceeded primarily downward and within the visible limit. Mining appears focused along the western quarry slopes between 2005 and 2018. Bench debris is locally evident in some images; however, these are temporary and generally do not appear in subsequent years on Google Earth.

Wedge systems visible and localized highwall failures/back break are visible along the western Black Mountain pit benches in aerial imagery. These are formed at intersections between northwest and northeast striking planar discontinuities. These features appear as continuous and prominent planar features at the southeast margin of the Black Mountain pit and are less visible at the north and south margin of Black Mountain pit. The northeast striking structures are also visible in native outcrop areas west of Black Mountain.

Quarrying in the Black Mountain pit is reported as beginning in the 1950s on an original mountain formerly 800 feet tall. Carbonate mining at White Mountain started in the 1940s and ended circa 1970s.

The Sidewinder area south of White Mountain appears relatively undisturbed with localized rugged outcrops and primarily soil and light vegetation cover.

## **AMENDED RECLAMATION PLAN SUMMARY**

The site currently includes the Black Mountain (CA Mine ID 91-36-0019, 209 acres) limestone quarry and the White Mountain (CA Mine ID 91-36-0106, 142 acres) limestone and aggregate quarry. It is proposed to amend the reclamation plan to allow mining in the undisturbed areas contiguous to the two quarries. The amended reclamation plan would encompass one large quarry. The amended reclamation plan totals approximately 848 acres. The proposed amended reclamation area, with several project areas labeled, is shown on the attached **Site Map**.

Bottom quarry elevations for Black Mountain could be in the range of 2,700 feet. Bottom quarry elevations for the White-Gray Mountain area could be in the range of 3,000 feet. The area South of Haul Road may have elevations in the range of 3,400 feet

The quarries could have reclaimed rock slopes with a maximum height of approximately 1,100 feet based on the revised reclamation plan. The overall slope angle would be on the order of 45 degrees, using 50 -foot high, 79-degree interbench faces with catch benches. We evaluated a suite of potential bench widths and face angles using a 50-foot bench height to develop potential slope configurations for the amended plan.

An overburden stockpile is located in the White Mountain Quarry. The reclaimed overburden slope angles and heights have not been specified.

## **FIELD INVESTIGATION**

### **Field Mapping**

A Certified Engineering Geologist mapped geologic features as exposed in the quarry and in undisturbed outcrop in the amended reclamation area during May and June of 2020. We utilized a combination of manual/paper and electronic mapping to locate, measure, and record geologic structure orientations and site imagery. This included measuring the orientation of geologic contacts and structures including faults, bedding, and joint orientations using a Brunton compass and smart phone-based geologic application. Data were recorded on a paper log and locations noted on a topographic map on the first day of field work. Subsequent mapping was executed using the electronic media. Our focus was on continuous features that can affect kinematic stability of quarry slope faces and wall-scale faults and contacts. A **Field Mapping Locations** plan is attached. Geologic structural mapping areas referred to herein (waypoints for May 29, 2020 and areas for subsequent mapping dates) are numbered and indicated on the attached plan.

## **SITE GEOLOGY**

Geologic units within the amended reclamation area include alluvium, colluvium, carbonate, metasedimentary and volcanic units. The units summarized below form the primary geologic materials in the quarry area and adjacent areas. The rock unit designations are consistent with Brown's mapping. A **Geologic Map and Site Plan** prepared from Brown's mapping is attached. Brown's mapping shows a complex interfingering of metasediment beds and intruding dikes all with a general northwest trend. The Sidewinder Volcanics area in the southern project area includes two major units. The map explanation and excerpts from Brown's 2017 synopsis of the Cemex limestone quarries are attached for reference.

### **Geologic Units**

Quarry fills and cuts slopes are located throughout the existing quarry area. Fills encompass areas obscured by mining and creation of access. These include safety berms, mine fills, stockpiles and debris. These areas were not observed in detail during the mapping. Fills and disturbed ground is visible in aerial imagery as light-colored ground as the majority of this material is derived from whitish limestone materials.

Alluvium and colluvium are present in the drainage area west of the Black Mountain pit and around the margins of slopes. The alluvium is derived from local highland sources; and includes sand and gravel materials, commonly with areas of accumulated surface cobbles along shallow



ephemeral drainages. An abundance of dark gray carbonate clasts (Jfv4) was noted in the drainages west of Black Mountain pit. The source for these sediments was the former highland of what is now the Black Mountain pit area.

The bedrock units in the project area comprise numerous individual units with several major rock type groups. These groups include the Sidewinder Volcanics (**Jsl** unit designations), the metasediments of the Fairview Valley Formation (**Jfv1, 2, 3** unit designations), and the carbonate units of the Fairview Valley Formation (**Jfv4u and l** unit designations). Detailed descriptions of these units are provided in the attached tables by Brown.

As observed during geologic mapping performed for this investigation, the Sidewinder geologic units include brown to black weathering rhyolite and dacite and brown quartz monzonite porphyry. These units are in fault and intrusive contact and form locally rugged outcrops in hillside terrain. The carbonate units of the Fairview Valley Formation, that include the Black Mountain quarry resource, are whitish, carbonate cobble (Jfv4u) and tectonized limestone cobble (Jfv4l) conglomerates. These rocks are extensively exposed by mining in the existing quarries and in native outcrops west of the Black Mountain pit. The remaining units of Fairview Valley Formation (Jfv1, 2, and 3) form a complex of interbedded metasediments with steeply dipping, northwest-striking relict bedding. Individual units vary in thickness and outcrop expression with the majority of material consisting of the Jfv3 calc-silicate unit that includes sandstone, siltstone, limestone beds, and limestone conglomerate. Carbonate beds within Jfv3 are shown in blue on the geologic map and designated Jfv3carb. Feldspathic and mafic dikes are designated Jfv3feld and Jfv3md, respectively.

The area west of Black Mountain and north of White Mountain (White-Gray Mountain area) is formed in units of Fairview Valley Formation (Jfv3) that include numerous dikes that contaminate the carbonate resource. This relation is similar to that described in prior reports for the White Mountain quarry area where carbonate mining was discontinued. The primary use of Fairview Valley (Jfv3) units may be considered as potential aggregate resource.

A small area of Jfv4 carbonate units (as mined in the Black Mountain pit) lies outside of the current pit at the northwest corner. This material has potential to produce cement-grade carbonate material; however, it is cut by faults and is closely associated with quartzite materials.

## **Geologic Structure**

Structural elements within the rock units are dominated by relict bedding, well-defined joint systems, and fault contacts. Large-scale structural trends are dominated by the syncline developed in the carbonate units of Jfv4 and steeply-dipping bedrock faults. Relict bedding is best identified at the outcrop scale in thinly-laminated units of the Jfv3 calc-silicate unit. A strong correlation of joints and relict bedding is apparent in the joint system mimicking the bedding orientation. With respect to discontinuity formation, the bedding is largely cosmetic, and joints are the primary control of discontinuity in the project area across all geologic units.



Major elements of the wall-scale geologic structure include:

- n Northwest-trending, steeply northeast- and southwest-dipping bedding developed within the carbonate units of Jfv4
- n A joint system developed subparallel to relict bedding that dips steeply northeast and southwest
- n Joint systems developed orthogonal to relict bedding that dip steeply southwest and southeast
- n East-west trending faults and shears that dip steeply to moderately northward

A more detailed analysis of the dominant geologic structures is presented the **Kinematic Analysis** section of this report.

## **SEISMIC CONSIDERATIONS**

The ground-shaking hazard at the site was evaluated from a deterministic standpoint for use as a guide to formulate an appropriate seismic coefficient for use in slope stability analysis. The deterministic calculation of peak ground acceleration (PGA) was made using attenuation relations of Abrahamson and others (2014), Boore and others (2014), Campbell and Bozorgnia (2014) and Chiou and Youngs (2014). For the Helendale fault with a magnitude of 7.4 at a distance of 0.5 kilometer, the estimated PGA is 0.58g. The North Frontal fault, with a magnitude of 7.2 at a distance of 19 kilometers, yields a PGA of 0.22g.

The simplified procedure of Bray and Travasarou (2009) for selection of critical acceleration ( $K_h$ ) as one-half PGA is commonly used for slope stability calculations for habitable structures. Their method is not typically required or applicable for quarry slope design. Given the project location in an area of moderate to high seismic potential, we used  $K_h = 0.20$ , consistent with Bray and Travasarou (2007), to approximate slightly less than one-half the value of PGA from the deterministic calculation for the closest fault and considering the purpose of the site.

## **GROUNDWATER**

Groundwater data for the site area are not available from the California Department of Water Resources (2020). The closest available data are from the valley area to the southwest of the site. The current depth to static groundwater is not known. The 2,700-foot topographic contour (proposed deepest pit bottom elevation) is not located within the region of the site. Based on the arid site conditions and site geology, we consider it unlikely that a static water table exists at or above elevation 2,700 at the site. Seepage or evidence of springs was not observed within or near the project boundary.

Groundwater conditions at completion of mining (reclamation stage) may include water seepage and ponding of limited extent. Groundwater is not anticipated to significantly affect the stability of the proposed reclamation slopes. Our evaluation considered dry conditions in the slope stability calculations.

## **SLOPE STABILITY**

Slope stability calculations for feasibility of reclamation rock slope configurations and kinematic analysis of potential failure geometries in rock benches were performed for the future quarry. The kinematic data include the measured geologic structures and pertinent data from site mapping. Global slope stability was evaluated along a model sections representing the tallest and steepest proposed slopes with consideration of the major geologic units and structures as they potentially affect the wall-scale stability. A discussion and summary of these analyses are presented below. The slope stability data and calculations are attached.

### **Existing Highwall Conditions**

The existing highwalls in Black Mountain consist of benched slopes that appear carefully managed as interim mining slopes. Geologic structural features are evident along the west and east sides of the pit as well-defined planar discontinuities – some of which traverse benches and are traceable at the mine wall scale. Exposure at White Mountain are limited and consist of roughly benched interim slopes.

All of these highwall features will be removed upon reclamation under the amendment. Therefore, they pose no concern with respect to the amended reclamation plan. However, these features are instructive as to the types and sizes of discontinuities that could occur during mining. The potential hazard of slope failure along these features is expected to be greatly reduced and mitigated under the proposed reclamation/benching program.

### **Kinematic Analysis**

Kinematic analysis involves the evaluation of rock slope stability based on the presence of structural discontinuities including bedding planes, joints, and faults. Kinematic analysis addresses only the potential failure mode(s) and does not consider mass, force, shear strength, or cohesion along surfaces as in a limit-equilibrium analysis. Structurally controlled kinematic failure modes include planar, wedge, and topple failures. Circular and composite circular/block failure of fractured rock masses are also potential failure modes and are considered in the analysis of global stability.

Stereonet analysis was performed using the proprietary DIPS software (Rocscience, 2018a) for representative slope/bench aspects utilizing the data compiled from mapping and measurement of geologic structures. A maximum bench face angle (80 degrees) was evaluated for various slope

facing directions (azimuth) for the amended reclamation area. Flatter bench face angles may be utilized; however, the evaluation of kinematics at 80 degrees presents a more conservative scenario. Reclaimed slope orientations will vary within the future quarry to accommodate the boundary orientation. The use of a sensitivity analysis that plots slope azimuth (facing direction) versus failure mode type allows study of the entire suite of slope azimuths for each failure mode. Stereonet diagrams are presented using the more critical azimuths for each failure mode and structural data set.

Planar analysis considers dip vectors of measured planar features. Planar sliding requires a releasing surface—a joint, tension crack or daylighted plane—to allow sliding to occur. Kinematic analysis does not consider the geometry of releasing surfaces or the presence of bonded contacts along the sliding plane; therefore, actual conditions are typically more stable than suggested by kinematic results. The potential for planar sliding or wedge failure suggested by stereonet analysis should be considered a conservative estimate of probability subject to mitigation by mining practices such as scaling and adjustment of slope face angles to the structural geometry and conditions encountered during mining. Wedge analysis generates dip vectors for the intersections of all planes; therefore, wedge analysis generates a large number of vectors to evaluate. Topple analysis identifies the potential for columns to form along steeply dipping joint systems or contacts to tilt out of the excavated face along separation surfaces. Several data sets were generated from the global structural data (1,309 data points) grouped by geologic unit, project area and/or structure type. The stereonet data plots are attached.

The following tables summarize the kinematic results from stereonet plots for four project areas defined by similar spatial and rock type characteristics. The data set for each area is derived from the global structural data set compiled for this investigation and are attached in tabular format for reference.

**Revised Slope Stability Investigation Report**

Black/White-Gray Mountain Quarries ■ Apple Valley, San Bernardino County, California

March 24, 2021 ■ Terracon Project No. CB205052

**Table 1.1: Summary of Kinematic Evaluation—Black Mtn.**

<b>Azimuth</b>	<b>Percentage Critical Points – 80-Degree Face</b>		
<b>(degrees)</b>	<b>Planar</b>	<b>Wedge</b>	<b>Topple</b>
000	7.6	26	3.9
090	4.5	22	8.1
180	4.8	28	7.7
270	6.2	27	6
50	7.4	--	21.5
140	10.5	--	--
230	14.8	--	11.2
150	--	29	--
220	--	32	--
310	--	--	11.2

**Table 1.2: Summary of Kinematic Evaluation—Sidewinder Area**

<b>Azimuth</b>	<b>Percentage Critical Points – 80-Degree Face</b>		
<b>(degrees)</b>	<b>Planar</b>	<b>Wedge</b>	<b>Topple</b>
000	4.6	11	18.1
090	3.7	13	7.9
180	12.5	30	5.2
270	6.7	25	3.6
010	--	--	19.3
070	--	--	12
140	--	--	10
190	--	34	--
230	--	--	--
190	17.8	--	--
240	--	31	--
250	11	--	--
350	--	--	12

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**Table 1.3: Summary of Kinematic Evaluation—White Mtn. Area**

<b>Azimuth</b>	<b>Percentage Critical Points – 80-Degree Face</b>		
<b>(degrees)</b>	<b>Planar</b>	<b>Wedge</b>	<b>Topple</b>
000	5	16	8.5
090	5	25	6.1
180	8.8	34	5
270	6.1	20	7
010	--	--	--
030	--	--	21
130	19.2	38	--
200	--	37	--
210	16.2	--	--
310	--	--	23

**Table 1.4: Summary of Kinematic Evaluation—Jfv3 Area**

<b>Azimuth</b>	<b>Percentage Critical Points – 80-Degree Face</b>		
<b>(degrees)</b>	<b>Planar</b>	<b>Wedge</b>	<b>Topple</b>
000	6.5	19	6.9
090	4.6	22	7.2
180	6.4	27	7.5
270	6	22	5.5
010	--	--	--
040	8.5	--	--
050	--	--	12.1
140	14.4	32	--
230	8.9	--	--
210	--	--	11.5
320	--	--	16

Sensitivity analysis charts of slope dip direction versus percentage critical points are provided for each failure mode in each of the four project areas. Stereonet diagrams are also provided for slope directions with highest relative kinematic failure potential for each failure mode. The tables above also include values for the four cardinal directions.

The stereonet evaluation provides results as a percentage of points in a data set with a geometrically feasible orientation to undergo a particular failure mode. In general, the percentage value relates to probability of a particular failure mode. Probabilities below 8 percent suggest low failure potential, 8 percent to 25 percent a low to moderate potential (green shading in the table above), and values above 25 percent (orange shading in the table above) a moderate or higher potential.

For the Black Mountain project area, the kinematic evaluation suggests low to moderate potential for planar and topple failures and moderate to high potential for wedge failure. The wedge potential is evident in existing cut faces and is related to intersections of continuous planar joint features. The relatively clean quality of existing mine slopes attests to the ability to mitigate these features by managed blasting and scaling techniques.

For the Sidewinder project area, the kinematic evaluation suggests low to moderate potential for planar and topple failures and moderate to high potential for wedge failure in slopes with south and west facing aspects. The wedge potential related to intersections of steeply dipping orthogonal joint sets. The relatively clean quality of existing mine slopes attests to the ability to mitigate these features by managed blasting and scaling techniques.

For the White Mountain project area, the kinematic evaluation suggests low to moderate potential for planar and topple failures and moderate to high potential for wedge failure in slopes with east and south facing aspects. The wedge potential is related to intersections of steeply dipping orthogonal joint sets. The wedge potential in the east facing aspect includes intersection between joints and bedding-influenced joints. The relatively clean quality of existing mine slopes attests to the ability to mitigate these features by managed blasting and scaling techniques.

For the Jfv3 project area, the kinematic evaluation suggests low to moderate potential for planar and topple failures and moderate to high potential for wedge failure in slopes with southeast to south facing aspects. The wedge potential is related to intersections of steeply dipping orthogonal joint sets and bedding/joint intersections. The relatively clean quality of existing mine slopes attests to the ability to mitigate these features by managed blasting and scaling techniques.

Faults observed within the project area are steeply dipping and exhibit less control on slope configuration than jointing. Faults are not anticipated to present significant control/hazards to slope geometry at the bench scale. At such time as the more significant faults are exposed during mining, examination of fault geometry and kinematic evaluation may be performed to provide a more accurate assessment of fault/slope structural interactions.

Based on mining practices that minimize the occurrence of hanging blocks by scaling and removal of potentially unstable localized features, the proposed final slope configuration is expected to produce a suitably configured slope geometry that mitigates rock fall for slopes in the reclaimed mine areas. Slope benching and configuration according to scenarios presented in the **Findings**

**and Conclusions** section of this report are considered feasible with regard to the kinematic performance of the proposed rock faces.

### Global Stability Calculations

The global stability of proposed reclamation slopes, as depicted on the amended reclamation plan, was analyzed using Spencer's method under both static and seismic conditions for rotational and composite failure surfaces using the SLIDE computer program, version 8.029 (Rocscience, 2019). Selection of the slope configurations for the analysis, which includes the tallest anticipated slope, is, in our opinion, a most-conservative approach.

Bottom quarry elevations could be in the range of 2,700 to 3,000 feet. The quarry could have reclaimed rock slopes with a maximum height of approximately 1,100 feet based on the revised reclamation plan. The overall slope angle would be on the order of 45 degrees, using 50 -foot high, 79-degree interbench faces with catch benches. We evaluated a suite of potential bench widths and face angles using a 50-foot bench height to develop potential slope configurations for the amended plan.

Slope stability calculations were performed for three representative rock types on slopes modeled as summarized in the following table:

Table 2: Summary of Global Slope Stability Models					
Height (ft.)	Face Height (ft.)	Face Angle	Bench Width (ft.)	Backbreak width (ft.)	Overall Slope Angle
1,100	50	79°	40	10	45°
1,100	50	84°	35	5	51°

The whole rock strength of the geologic units was determined in part by reference to our database of unconfined compressive strength (UCS) tests, and reference to a database of Generalized Hoek-Brown rock strength parameters included in the SLIDE software application (Hoek and Karzulovic, 2000 and Hoek, Carranza-Torres & Corkum, 2002). The strength parameter values are summarized in the following tables.

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**Table 3.1: Limestone units – Strength Parameters**

	Value	Source
Unit Weight (pcf*)	165	Lab test database
Intact UCS <sup>1</sup> (psf**)	1.50 x10 <sup>6</sup>	Lab test database
Geological Strength Index	35	Rocscience tables
Intact Rock Constant (mi***)	12	Rocscience tables
Disturbance Factor	0.7	Controlled blasting/Mechanical excavation

\* pcf = pounds per cubic foot  
 \*\* psf = pounds per square foot  
 \*\*\* mi = unitless constant

**Table 3.2: Sidewinder units – Strength Parameters**

	Value	Source
Unit Weight (pcf*)	165	Lab test database
Intact UCS <sup>1</sup> (psf**)	3.50 x10 <sup>6</sup>	Lab test database
Geological Strength Index	40	Rocscience tables
Intact Rock Constant (mi***)	25	Rocscience tables
Disturbance Factor	0.7	Controlled blasting/Mechanical excavation

\* pcf = pounds per cubic foot  
 \*\* psf = pounds per square foot  
 \*\*\* mi = unitless constant

**Table 3.3: Fairview Valley (Jfv3) units – Strength Parameters**

	Value	Source
Unit Weight (pcf*)	165	Lab test database
Intact UCS <sup>1</sup> (psf**)	1.50 x10 <sup>6</sup>	Lab test database
Geological Strength Index	40	Rocscience tables
Intact Rock Constant (mi***)	19	Rocscience tables
Disturbance Factor	0.7	Controlled blasting/Mechanical excavation

\* pcf = pounds per cubic foot  
 \*\* psf = pounds per square foot  
 \*\*\* mi = unitless constant



The results of global slope stability analyses are summarized below. Details of stability calculations including material type boundaries, strength parameters, and the minimum factor of safety and critical slip surface are attached.

<b>Table 4: Summary of Global Stability Results</b>				
<b>Model</b>	<b>Materials</b>	<b>Slope Configuration</b>	<b>Static Factor of Safety</b>	<b>Seismic Factor of Safety (with <math>K_h=0.2</math>)</b>
45° overall slope	Limestone	1,100' H, 40' bench, 50' face, 79° faces	2.07	1.54
	Sidewinder		2.43	1.79
	Jfv3		1.75	1.29
51° overall slope	Limestone	1,100' H, 35' bench, 50' face, 84° faces	1.80	1.36
	Sidewinder		2.10	1.56
	Jfv3		1.52	1.13

Sufficient static factors of safety (FS) in excess of 1.5 and seismic factors of safety at or greater than 1.1, which are in conformance with Division of Mine Reclamation (DMR) criteria, were indicated for the modeled scenario rock slopes configurations.

The global stability calculations assume a homogenous rock mass and do not account for localized weak materials resulting from near-surface weathering or geologic structures such as faults or materials contacts. Bench-scale zones exhibiting weak and weathered materials, loose blocks, or problematic geologic structure should be identified and scaled or flattened during mining if encountered.

## **FINDINGS AND CONCLUSIONS**

Based on our geologic field observations and results of our slope stability analysis, it is the opinion of this firm that slope configurations within the suite of scenario slopes analyzed for this investigation are feasible with respect to slope stability from a geotechnical standpoint. Slopes formed in the rock units are stable by calculation at angles between 45 and 51 degrees utilizing 1,100-foot-tall slopes. Consideration of local fault/structural conditions in reclamation may include modification of geometry to achieve suitable face angles and overall slope angles in the various rock materials.

The following range of slope heights/angles are considered feasible for reclamation:

- § Rock materials (all scenario types) — overall slopes at 45° up to 1,100 feet in height configured with 50-foot tall, 79° faces and 40-foot-wide benches, 10-foot back break zone

§ Rock materials (all scenario types) — overall slopes at 51° up to 1,100 feet in height configured with 50-foot tall, 84° faces and 35-foot-wide benches, 5-foot back break zone

Based on the arid site conditions and site geology, we consider it unlikely that a static water table exists at or above elevation 2,700 (proposed maximum depth of reclaimed pit bottom elevation). Groundwater conditions during mining and at completion of mining (reclamation stage) may include water seepage and ponding of limited extent. Groundwater is not anticipated to significantly affect the stability of the proposed reclamation slopes.

Moderate seismic shaking of the site can be expected to occur during the lifetime of the proposed mining and reclamation. This potential has been considered in our analyses and evaluation of slope stability.

Based on the results of our stability analyses, the range of scenario rock slope configurations are considered stable under static and seismic conditions as reclaimed slopes. Inclusion of horizontal safety benches in final slope design will flatten the overall slope angle, is an effective protection from rockfall, will reduce tensional forces in surface rock, and will reduce surface erosion rates (Highland and Brabowsky, 2008). Slopes may be protected with berms as necessary to prevent slope erosion in areas where overland flow is directed toward slopes.

The configuration of wall height, wall angle and bench width is controlled primarily by the type of mining equipment used and the geologic structure and bench face angles that can be achieved (Ryan and Pryor, 2000). Typical wall heights in hard rock mines range from 35 to 50 feet, which is the expected range for the proposed quarry reclamation.

The rock mass within the pit area is generally competent and capable of forming stable slopes at the proposed slope angles for reclamation. The rock structure includes bedding and joint systems that have been characterized by analysis to yield suitably stable rock slopes. Localized structures at the bench scale may form zones that require scaling and/or excavation to flatten or steepen face angles to achieve suitable reclamation conditions. At such time and locations as reclamation slopes are excavated, a qualified professional from Terracon should examine the slope conditions to determine conformance with the reclamation plan.

Slow raveling processes during and after quarry operation, may, with time, result in deposition of limited talus on benches. Talus left on the benches can facilitate revegetation and lend a more natural appearance to the reclaimed slopes. It is anticipated that rock fragments will be angular and relatively resistant to rolling. Therefore, rockfall hazard is not anticipated for properly excavated and scaled reclamation rock slopes.

Based on anticipated reclamation slope conditions, use of netting or other engineered installations to mitigate toppling or rockfall is not considered necessary; however, these measures, as well as a berm at the toe of the final quarry slopes, may be considered if warranted by future conditions. As is typical for any surface mining location, we recommend periodic observation of mine benches for indications of potential instability above working areas during mine operations.

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Visual inspection of rock excavations and reclamation slopes/benches should be performed to address the potential for unknown or newly exposed discontinuities/geologic conditions. If raveling or instability is evident due to features in the geologic structure, the bench width may be increased to provide a suitable buffer to daylighted or unstable features and a sufficient area to mitigate rockfall.

Production blasting and/or mechanical excavation are suitable methods for developing mine slopes. However, when reclaimed slope faces are reached, blasting should be planned and controlled so that final catch benches are constructed in accordance with the approved reclamation plan and to avoid excess disturbance to finished surfaces. Degradation or clogging of catch benches can allow rockfall to reach lower mine levels.

This report is intended to address the proposed reclamation and is not applicable to working mine (interim) slopes which may be steeper and/or of different configuration than the reclamation plan.

Periodic or annual inspections of quarry wall stability with respect to toppling, wedge failures and rockfall hazards should be conducted as quarrying progresses. The intent of these inspections is to provide opportunity for recommendations to prevent or remediate potentially hazardous conditions that may be revealed during mining. The kinematic condition associated with the interaction of faults and individual walls, if exposed in reclamation slopes, should be examined during annual inspections.

## **GENERAL COMMENTS**

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

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## Aerial Imagery Examined

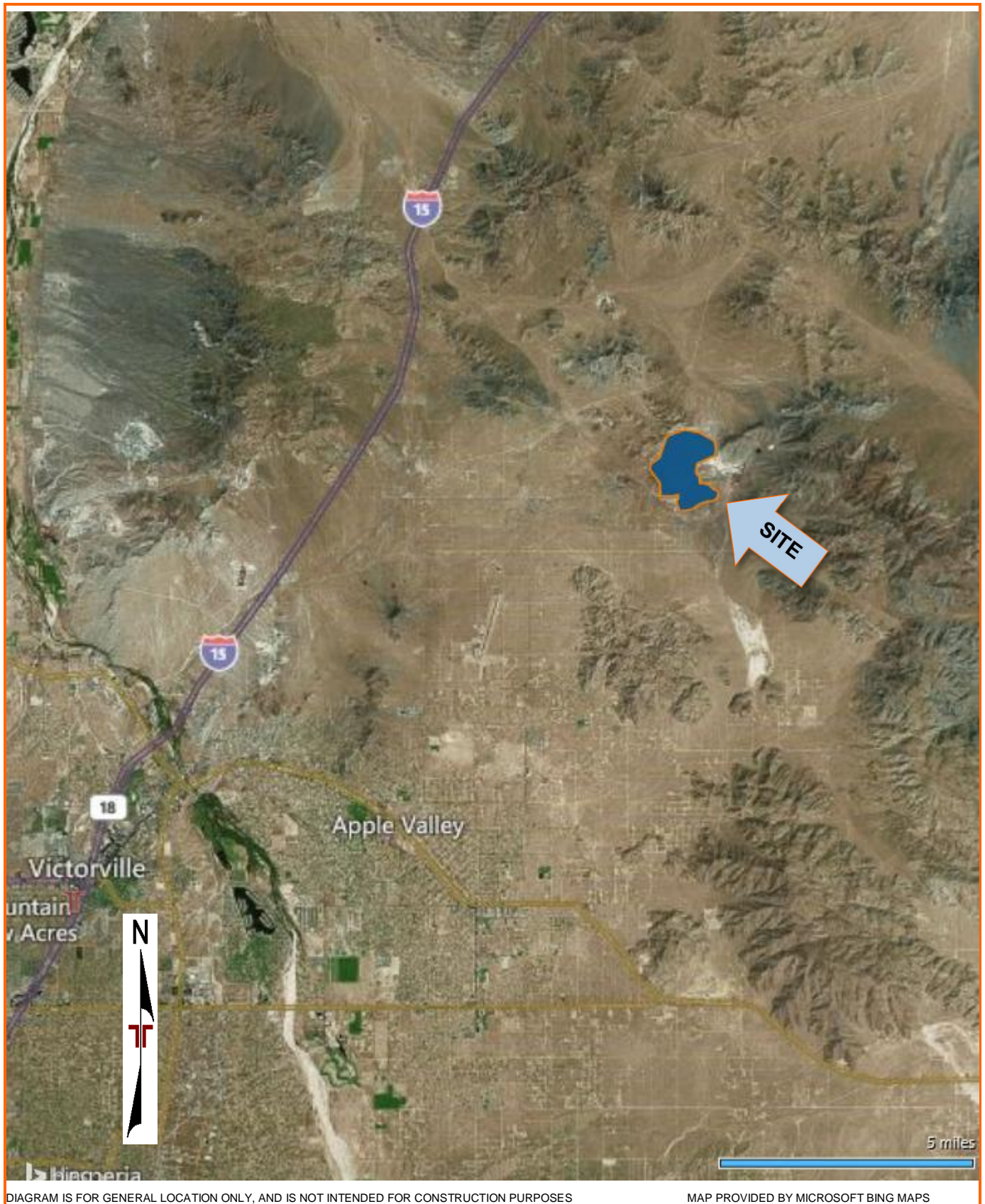
Google Earth, 2019, web-based software application, aerial imagery dated May 28, 1994; June 27, 2003; December 31, 2004; December 31, 2005; May 24, 2009; January 31, 2009; March 21, 2013; January 1, 2015; September 4, 2016; June 13, 2017; December 28, 2017.

## ATTACHMENTS



## SITE LOCATION MAP

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## SITE MAP

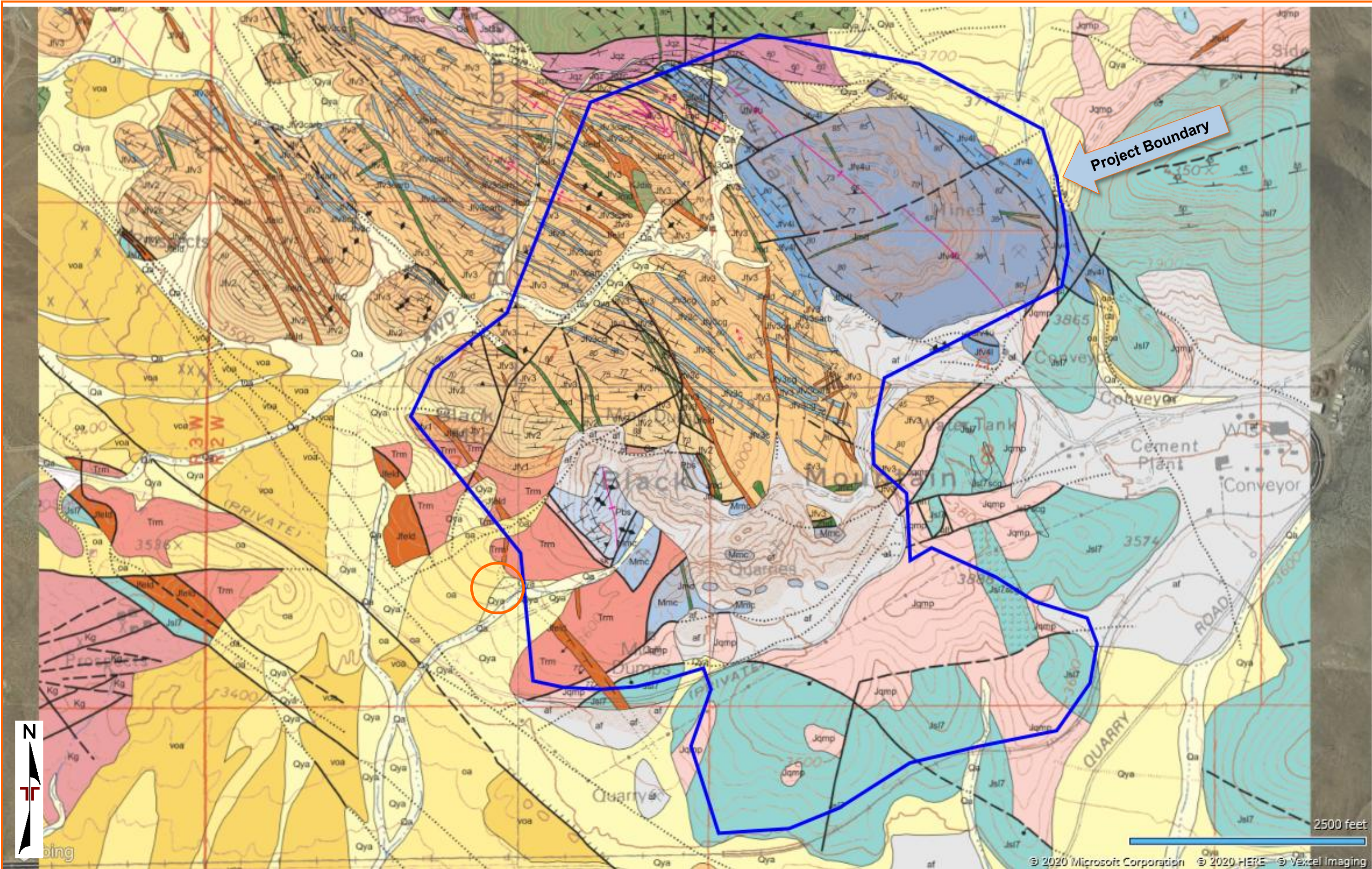
Black/White Mtn. ■ Apple Valley, San Bernardino County, California  
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Geologic Map and Site Plan

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Geologic Map Explanation

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B	af	Artificial fill	Jfv3	Unit 3, calc-hornfels, sandstone, limestone, and conglomerate
	Qa	Alluvium of active washes (Quaternary)	Jfv2	Unit 2, argillite and sandstone
	Qya	Young alluvium (Quaternary)	Jfv1	Unit 1, conglomerate and quartzite
	Qoa	Old alluvium (Quaternary)	TRm	Hornblende monzonite (Triassic)
	QTva	Very old alluvium (Quaternary and/or Pliocene)	PPbs	Bird Spring Formation (Permian and Pennsylvanian)
	Kg	Granitic rocks (Cretaceous)	Mmc	Monte Cristo Limestone (Mississippian)
	KJd	Diorite, gabbro, and diabase (Cretaceous or Jurassic)	Ds	Sultan Limestone (Devonian)
	KJm	Migmatite (Cretaceous and Jurassic)	Cn	Nopah Formation (Cambrian)
	Jsur	Rhyolite of Upper Sidewinder Volcanics (Jurassic)	Cbk	Bonanza King Formation (Cambrian)
	Jfd	Felsite dikes (Jurassic)	Cc	Carrara Formation (Cambrian)
	Jmd	Mafic dikes (Jurassic)	Cz	Zabriskie Quartzite (Cambrian)
	Jqm	Quartz monzonite (Jurassic)	CZw	Wood Canyon Formation (Cambrian and Neoproterozoic)
	Jqmp	Quartz monzonite porphyry (Jurassic)		
	Jf	Felsite (Jurassic)		
	Ja	Alaskite (Jurassic)		
Lower Sidewinder Volcanics (Jurassic)				
Jsl8	Unit 8, dacitic ignimbrite			
Jsl7	Unit 7, rhyolitic to dacitic ignimbrite. Includes:			
Jsl7l	Lahar deposits			
Jsl7r	Red-weathering ignimbrite			
Jsl7s	Sedimentary rocks			
Jsl5	Unit 5, andesite, basalt, and sedimentary rocks			
Jsl4	Unit 4, ignimbrite			
Jsl3	Unit 3, rhyolitic ignimbrite. Includes:			
Jsl3a	Andesite			
Jsl3s	Sandstone and conglomerate			
Jqz	Quartzite and minor conglomerate			
Jfv	Fairview Valley Formation (Jurassic). Divided into:			
Jfv4u	Unit 4, limestone conglomerate, upper part			
Jfv4l	Unit 4, limestone conglomerate, lower part			

Geology of the Cemex Inc. limestone quarries, Sidewinder Mountain–Black Mountain area, California

TABLE 3. LOWER SIDEWINDER VOLCANICS, BLACK MOUNTAIN–SIDEWINDER MOUNTAIN	
Jsl11	Medium-brown fine-grained dacite and dacite porphyry. No lithic clasts. Vertically dipping 1 mile long and 70 m thick. Overlies Jsl10. Intruded by Jurassic granite, and extensively altered to skarn. Extremely foliated and cleaved at western limit. <b>Not present in Black Mountain–Sidewinder Mountain map area.</b>
Jsl10	Felsite, tan to light-brown, fine-grained, felsite and felsite porphyry. No lithic clasts. Discordantly overlies Jsl8 and Jsl9. Vertically dipping 1 mile long and 70 m. May be unconformable but now likely in fault contact with Jsl8 and Jsl9. <b>Not present in Black Mountain–Sidewinder Mountain map area.</b>
Jsl9	Andesite flow, very dark-olive black weathering fine-grained andesite with small feldspar phenocrysts. Overlies Jsl8 at east end of Sidewinder Mountain. <b>Not present in Black Mountain–Sidewinder Mountain map area.</b>
Jsl8	Massive to blocky, dark-brown to dark-gray dacitic lithic rich ignimbrite common abundant (up to 30%) lithic fragments. Significant amount of pumice in some places. Nonlithic ignimbrite, felsite layers (waterlain ash or air fall tuff), volcanic-derived conglomerate, pebble beds, sandstone, and reworked ignimbrites also differentiated. Correlated with unit Jsl4 of Schermer and Busby (1994).
Jsl7	Resistant, rusty-brown to black weathering rhyolite to dacite ignimbrite. On fresh surface rock is light- and dark-gray speckled, abundant rounded embayed quartz, and white to pink feldspar, generally lacks pumice or lithic fragments. Mesobreccia, lithic-rich ignimbrite, uncommon conglomerate, and dark-colored dacite also differentiated. Correlated with unit Jsl2 of Schermer and Busby (1994).
Jsl7L	Lahar deposits; poorly sorted, very coarse, rounded, gray dacite cobbles and boulders derived from unit Jsl7. Occur in upper part of Jsl7. Form lenticular deposits 1–2 km wide up to 200 m thick.
Jsl7S	Sedimentary rocks in upper part of Jsl7. Up to 60 m thick. Black, dark-maroon, and minor tan weathering siltstone, laminated siltstone, fine to coarse sandstone and thin conglomerate layers, containing a variety of volcanic clasts, and thin andesite flows.
Jsl6	Light-brown streaky pumice fiamme tuff. <b>Not present in Black Mountain–Sidewinder Mountain map area.</b>
Jsl5	Black, dark–olive green and thin-laminated andesite, vesicular basalt, purple fine-grained sediment, andesite porphyry, and dark-gray to black siltstone and thin conglomerate layers. Outcrops on the southern slope of North Black Mountain. Includes unit Its and Jslub of Schermer and Busby (1994).
Jsl4	Light-tan to light-medium-gray lithic ignimbrite/tuff, common weathered out lithic fragments up to 8 cm across. Often foliated and streaky. Outcrops on southern slopes of North Black Mountain. Includes <b>Jslc</b> white clay deposits related to hydrothermal alteration on low-angle faults. <b>Not present in Black Mountain Sidewinder mountain map area.</b>
Jsl3a	Andesite hypabyssal intrusive and/or flows. Massive, reddish-brown weathering, dark-colored fine-grained igneous rock. Generally altered to secondary sericite and epidote. Appears intrusive into Jsl3. Correlates with unit Jia of Stone (2006).
Jsl3	Oldest Lower Sidewinder units exposed at Black Mountain–Sidewinder Mountain. 1000 m tectonic thickness of rhyolitic ignimbrites. Orange to reddish-brown weathering, cleaved, sheared and foliated, steep northeast dip. White, tan, and light gray on fresh surface, fine grained, with scattered plagioclase phenocrysts, and occasional lithic fragments. Abundant flattened, elongated pumice lapilli in some places. Includes dark weathering fine-grained thin-laminated dacite. Unconformably overlies quartzite above the Fairview Valley Formation. Existing contact may be a fault. Correlated with unit Jsl1 of Schermer and Busby (1994).
Jsl3sed	Sandstone and conglomerate in upper part of unit. Massive to laminated, fine to coarse grained. Weathers gray and reddish-brown. Sandstone ranges from pure mature quartz to impure. Interbedded with thin conglomerate layers containing volcanic clasts.
Jsl2	Light- to medium-gray fine-grained lithic tuff with flattened pumice streaks, possible vitrophyre at base. <b>Not present in Black Mountain–Sidewinder Mountain map area.</b>
Jsl1	Light-brown to rusty lithic tuff. <b>Not present in Black Mountain–Sidewinder Mountain map area.</b>
Jsla	Dark-green to dark-gray andesite and andesite porphyry and altered hypabyssal intrusive ( <b>Jslh</b> ). <b>Not present in Black Mountain–Sidewinder Mountain map area.</b>

**Reference:** Brown, H., 2017, Geology of the Cemex Inc. Limestones Quarries, Sidewinder Mountain-Black Mountain area, San Bernardino County, California in 2016 GSA Cordilleran Section Meeting field guide.

## Geologic Map Explanation

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TABLE 2. INFORMAL MEMBERS OF THE FAIRVIEW VALLEY FORMATION

Unit designation	Description	Thickness (m)
<b>Jfv4u</b>	Limestone cobble conglomerate, thick bedded to massive. Dark-gray non-metamorphosed limestone clasts in dark-gray matrix. Extensively mined for cement as high-grade ore.	300
<b>Jfv4l</b>	Tectonized limestone cobble conglomerate. Dark-gray non-metamorphosed limestone clasts in light-gray sheared, schistose matrix. Very minor interbedded calc-silicate near base. Extensively mined for cement as low-grade ore due to increased magnesium and silica content.	100
<b>Jfv3</b>	Orange to dark-brown weathering, fine-grained calc-silicate hornfels, light green on fresh surface. Occasional silty and sandy layers. Subordinate interbedded siltstone, mudstone, marl, carbonate, and conglomerate (carbonate and noncarbonate) layers up to 7 m thick, which may extend 650 m on strike were differentiated in mapping.	800
<b>Jfv2</b>	Dark-brown weathering, massive appearing to thin-banded to nonlayered noncalcareous calc-silicate argillite and lesser sandstone.	250
<b>Jfv1</b>	Quartzite and intrusive cobble conglomerate. Includes Triassic monzonite. 5 km east Jfv1 is 200 m of meta-carbonate conglomerate. Jfv1 also present at Quartzite Mountain.	50
<b>Basal unit</b>	Carbonate cobble conglomerate	6

**Reference:** Brown, H., 2017, Geology of the Cemex Inc. Limestones Quarries, Sidewinder Mountain-Black Mountain area, San Bernardino County, California in 2016 GSA Cordilleran Section Meeting field guide.



## FIELD MAPPING LOCATIONS

Black/White Mtn. ■ Apple Valley, San Bernardino County, California

March 24, 2021 ■ Terracon Project No. CB205052

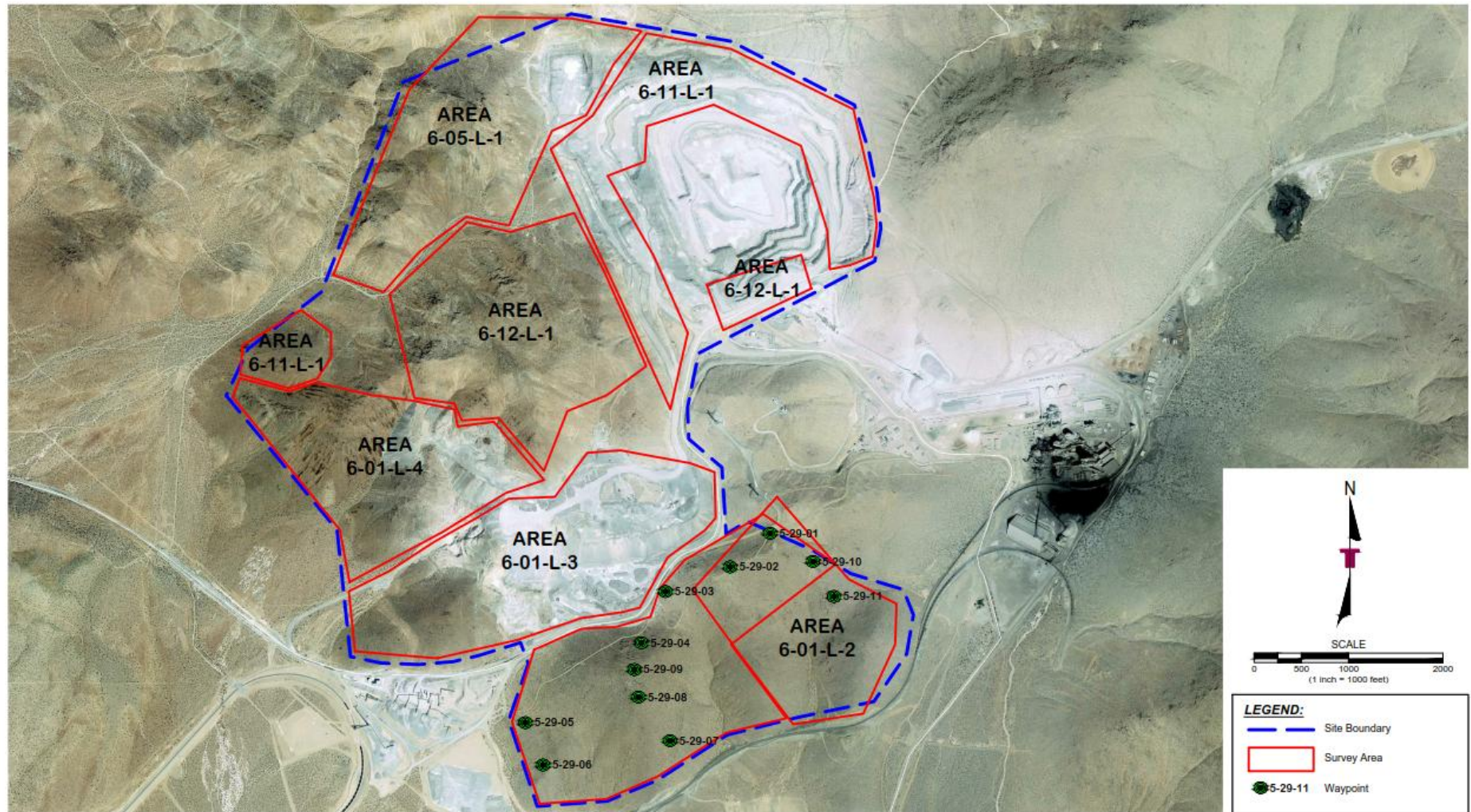


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

## Black Mtn./White Mtn. Comprehensive Data - Kinematic

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
1	79	264	4	Joint	sidewinder	Jqmp, Jsl7	1	1	5-29
2	73	094		Joint	sidewinder	Jqmp, Jsl7	1	1	5-29
3	64	326		Joint	sidewinder	Jqmp, Jsl7	1	1	5-29
4	54	080		Joint	sidewinder	Jqmp, Jsl7	1	1	5-29
5	43	209		Joint	sidewinder	Jqmp, Jsl7	2	1	5-29
6	74	050	7	Joint	sidewinder	Jqmp, Jsl7	1	1	5-29
7	34	121		Joint	sidewinder	Jqmp, Jsl7	2	1	5-29
8	49	230		Joint	sidewinder	Jqmp, Jsl7	2	1	5-29
9	83	285		Joint	sidewinder	Jqmp, Jsl7	2	1	5-29
10	86	340		Joint	sidewinder	Jqmp, Jsl7		1	5-29
11	72	271	4	Joint	sidewinder	Jqmp, Jsl7	2	1	5-29
12	24	175	5	Joint	sidewinder	Jqmp, Jsl7	2	2	5-29
13	31	188	5	Joint	sidewinder	Jqmp, Jsl7		2	5-29
14	58	180		Joint	sidewinder	Jqmp, Jsl7	3	3	5-29
15	81	260	4	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29
16	73	148	1	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29
17	45	034		Joint	sidewinder	Jqmp, Jsl7	3	3	5-29
18	46	283		Joint	sidewinder	Jqmp, Jsl7	1	3	5-29
19	61	240	3	Joint	sidewinder	Jqmp, Jsl7	1	3	5-29
20	47	320		Joint	sidewinder	Jqmp, Jsl7	1	3	5-29
21	53	238	3	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29
22	31	022	6	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29
23	22	192	5	Joint	sidewinder	Jqmp, Jsl7		3	5-29
24	82	186	2	Joint	sidewinder	Jqmp, Jsl7	2	3	5-29
25	52	030		Joint	sidewinder	Jqmp, Jsl7	2	3	5-29
26	43	016		Joint	sidewinder	Jqmp, Jsl7	2	4	5-29
27	44	208		Joint	sidewinder	Jqmp, Jsl7	1	4	5-29
28	78	145	1	Joint	sidewinder	Jqmp, Jsl7	1	4	5-29
29	52	015		Joint	sidewinder	Jqmp, Jsl7	3	4	5-29
30	62	195	2	Joint	sidewinder	Jqmp, Jsl7	3	4	5-29
31	24	180	5	Joint	sidewinder	Jqmp, Jsl7	3	4	5-29
32	24	289		Joint	sidewinder	Jqmp, Jsl7		4	5-29
33	63	015	8	Joint	sidewinder	Jqmp, Jsl7	4	4	5-29
34	47	269		Joint	sidewinder	Jqmp, Jsl7	4	4	5-29
35	65	359	8	Joint	sidewinder	Jqmp, Jsl7	3	4	5-29
36	81	325		Joint	sidewinder	Jqmp, Jsl7	5	4	5-29
37	49	225		Joint	sidewinder	Jqmp, Jsl7	5	4	5-29
38	30	160	5	Joint	sidewinder	Jqmp, Jsl7	3	4	5-29
39	52	198		Joint	sidewinder	Jqmp, Jsl7	1	5	5-29
40	85	305		Joint	sidewinder	Jqmp, Jsl7		5	5-29
41	80	175		Joint	sidewinder	Jqmp, Jsl7		5	5-29
42	79	255	4	Joint	sidewinder	Jqmp, Jsl7		5	5-29
43	65	160		Joint	sidewinder	Jqmp, Jsl7		5	5-29
44	58	120	1	Joint	sidewinder	Jqmp, Jsl7	1	6	5-29
45	83	200	2	Joint	sidewinder	Jqmp, Jsl7	2	6	5-29
46	81	131	1	Joint	sidewinder	Jqmp, Jsl7	1	7	5-29
47	40	195	5	Joint	sidewinder	Jqmp, Jsl7	3	7	5-29
48	69	340		Joint	sidewinder	Jqmp, Jsl7	3	8	5-29
49	44	110		Joint	sidewinder	Jqmp, Jsl7	2	8	5-29

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
50	87	090		Joint	sidewinder	Jqmp, Jsl7	1	8	5-29
51	75	340		Joint	sidewinder	Jqmp, Jsl7	2	8	5-29
52	44	220		Joint	sidewinder	Jqmp, Jsl7	3	8	5-29
53	83	221	3	Joint	sidewinder	Jqmp, Jsl7	2	9	5-29
54	5	235		Joint	sidewinder	Jqmp, Jsl7	1	9	5-29
55	50	306		Joint	sidewinder	Jqmp, Jsl7	1	9	5-29
56	33	228		Joint	sidewinder	Jqmp, Jsl7	3	9	5-29
57	49	345		Joint	sidewinder	Jqmp, Jsl7	3	9	5-29
58	56	090		Joint	sidewinder	Jqmp, Jsl7	2	9	5-29
59	74	185	2	Joint	sidewinder	Jqmp, Jsl7	3	10	5-29
60	34	210	5	Joint	sidewinder	Jqmp, Jsl7	1	10	5-29
61	63	131	1	Joint	sidewinder	Jqmp, Jsl7		10	5-29
62	14	003	6	Joint	sidewinder	Jqmp, Jsl7	4	10	5-29
63	77	180	2	Joint	sidewinder	Jqmp, Jsl7	2	11	5-29
64	73	200	2	Joint	sidewinder	Jqmp, Jsl7		11	5-29
65	41	019		Joint	sidewinder	Jqmp, Jsl7		11	5-29
66	76	312		Joint	sidewinder	Jqmp, Jsl7	4	11	5-29
67	35	028	6	Joint	sidewinder	Jqmp, Jsl7		11	5-29
68	23	220	5	Joint	sidewinder	Jqmp, Jsl7	4	11	5-29
69	76	126	1	Bedding	Dikes	Trm	5	Locality 4	6-01
70	62	189	2	Joint	Dikes	Trm	2	Locality 4	6-01
71	66	186	2	Joint	Dikes	Trm	2	Locality 4	6-01
72	20	205	5	Joint	Dikes	Trm	4	Locality 4	6-01
73	75	125	1	Joint	Dikes	Trm	5	Locality 4	6-01
74	57	44		Joint	Felsic dike	Jfeld	2	Locality 4	6-01
75	67	118	1	Joint	Felsic dike	Jfeld	5	Locality 4	6-01
76	68	122	1	Joint	Felsic dike	Jfeld	4	Locality 4	6-01
77	72	126	1	Joint	Fv	Jfv1, Jfv2	5	Locality 4	6-01
78	77	195	2	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
79	73	131	1	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
80	63	127	1	Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01
81	86	225	3	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
82	80	123	1	Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01
83	66	196	2	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
84	35	238		Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
85	77	273	4	Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01
86	73	136	1	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
87	73	29	8	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
88	20	257		Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01
89	62	29	8	Bedding	Fv	Jfv1, Jfv2	4	Locality 4	6-01
90	21	248		Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
91	57	93		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01
92	34	241		Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01
93	73	131	1	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
94	71	126	1	Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01
95	28	19	6	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
96	57	91		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01
97	6	295	6	Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01
98	75	188	2	Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
99	81	253	4	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
100	54	12		Bedding	Fv	Jfv1, Jfv2	4	Locality 4	6-01
101	70	130	1	Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01
102	71	208	2	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01
103	81	188	2	Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01
104	54	92		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01
105	87	348		Joint	Dikes		4	Locality 4	6-01
106	4	60	6	Joint	Dikes		4	Locality 4	6-01
107	85	194	2	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
108	63	306		Bedding	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01
109	69	19	8	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01
110	73	299		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
111	46	336		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
112	79	113		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
113	43	51		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01
114	60	16	8	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01
115	83	135	1	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
116	64	209	2	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01
117	88	240	3	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01
118	87	148		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01
119	36	357		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
120	65	101		Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01
121	74	37	7	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01
122	15	255		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01
123	85	330		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01
124	76	328		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01
125	89	151		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01
126	71	194	2	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
127	23	2	6	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
128	66	80		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01
129	71	140	1	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01
130	78	204	2	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
131	84	138	1	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01
132	77	74		Joint	Wht mtn ls	Mmc, Pbs	1	Locality 4	6-01
133	86	52	7	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01
134	75	323		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01
135	87	143	1	Plane Type 1	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01
136	77	206	2	Joint	Intrusive fgrnd	Trm	2	Locality 4	6-01
137	43	169	5	Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01
138	67	141	1	Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01
139	76	194	2	Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01
140	74	344		Joint	Intrusive fgrnd	Trm	1	Locality 4	6-01
141	72	133	1	Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01
142	72	129	1	Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01
143	40	59		Joint	Intrusive fgrnd	Trm	4	Locality 4	6-01
144	9	72	6	Joint	Intrusive fgrnd	Trm	1	Locality 4	6-01
145	78	144	1	Joint	Intrusive fgrnd	Trm	2	Locality 4	6-01
146	74	77		Joint	Intrusive fgrnd	Trm	1	Locality 4	6-01
147	19	30	6	Joint	Dikes		3	Locality 3	6-01



ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
148	71	210	2	Joint	Dikes		2	Locality 3	6-01
149	65	252	4	Joint	Dikes		2	Locality 3	6-01
150	64	119	1	Fault	Dikes		4	Locality 3	6-01
151	59	207	2	Fault	Dikes		3	Locality 3	6-01
152	62	143	1	Joint	Wht mtn ls	Mmc	3	Locality 3	6-01
153	68	141	1	Joint	Wht mtn ls	Mmc	1	Locality 3	6-01
154	68	141	1	Joint	Wht mtn ls	Mmc	4	Locality 3	6-01
155	58	96		Joint	Wht mtn ls	Mmc	3	Locality 3	6-01
156	69	136	1	Joint	Wht mtn ls	Mmc	3	Locality 3	6-01
157	38	324		Joint	Wht mtn ls	Mmc	4	Locality 3	6-01
158	45	322		Joint	Wht mtn ls	Mmc	3	Locality 3	6-01
159	50	200		Bedding	Wht mtn ls	Mmc	5	Locality 3	6-01
160	82	129	1	Joint	Wht mtn ls	Mmc	2	Locality 3	6-01
161	33	137		Joint	Wht mtn ls	Mmc	3	Locality 3	6-01
162	65	224	3	Bedding	Wht mtn ls	Mmc	4	Locality 3	6-01
163	60	134	1	Joint	Dikes	Mmc	2	Locality 3	6-01
164	83	306		Joint	Dikes	Mmc	3	Locality 3	6-01
165	66	211	2	Joint	Dikes	Mmc	3	Locality 3	6-01
166	28	156	5	Joint	Dikes	Mmc	3	Locality 3	6-01
167	53	126	1	Joint	Dikes	Mmc	1	Locality 3	6-01
168	61	208	2	Joint	Dikes	Mmc	3	Locality 3	6-01
169	70	271	4	Bedding	Dikes	Mmc	5	Locality 3	6-01
170	64	258	4	Bedding	Dikes	Mmc	5	Locality 3	6-01
171	54	221	3	Joint	Dikes	Mmc	3	Locality 3	6-01
172	58	192	2	Joint	Dikes	Mmc	3	Locality 3	6-01
173	80	209	2	Joint	Dikes	Mmc	5	Locality 3	6-01
174	67	209	2	Joint	Dikes	Mmc	4	Locality 3	6-01
175	63	281		Joint	Dikes	Mmc	5	Locality 3	6-01
176	69	257	4	Joint	Dikes	Mmc	4	Locality 3	6-01
177	72	209	2	Joint	Dikes	Mmc	2	Locality 3	6-01
178	78	95		Joint	Dikes	Mmc	3	Locality 3	6-01
179	89	52	7	Joint	Dikes	Mmc	1	Locality 3	6-01
180	82	226	3	Joint	Dikes	Mmc	2	Locality 3	6-01
181	26	215	5	Joint	Dikes	Mmc	3	Locality 3	6-01
182	81	98		Joint	Dikes	Mmc	3	Locality 3	6-01
183	66	223	3	Joint	Dikes	Mmc	3	Locality 3	6-01
184	33	37	6	Joint	Dikes	Mmc	4	Locality 3	6-01
185	87	140	1	Joint	Dikes	Mmc	4	Locality 3	6-01
186	32	49	6	Joint	Dikes	Mmc	2	Locality 3	6-01
187	70	42	7	Cleavage	Dikes	Mmc	1	Locality 3	6-01
188	34	38	6	Joint	Dikes	Mmc	3	Locality 3	6-01
189	80	205	2	Joint	Dikes	Mmc	2	Locality 3	6-01
190	62	138	1	Joint	Dikes	Mmc	2	Locality 3	6-01
191	55	22	8	Joint	Dikes		2	Locality 3	6-01
192	69	207	2	Joint	Dikes	Trm	4	Locality 3	6-01
193	85	138	1	Joint	Dikes	Trm	2	Locality 3	6-01
194	65	320		Joint	Dikes	Trm	3	Locality 3	6-01
195	82	102		Joint	Dikes	Trm	3	Locality 3	6-01
196	48	16		Joint	Dikes	Trm	1	Locality 3	6-01

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
197	75	195	2	Joint	Dikes		2	Locality 3	6-01
198	74	195	2	Joint	Dikes		1	Locality 3	6-01
199	59	208	2	Joint	Dikes	Mmc	1	Locality 3	6-01
200	86	134	1	Joint	Dikes	Mmc	2	Locality 3	6-01
201	69	217	3	Joint	Dikes	Mmc	1	Locality 3	6-01
202	71	213	3	Joint	Dikes	Mmc	2	Locality 3	6-01
203	65	127	1	Joint	Dikes	Mmc	1	Locality 3	6-01
204	77	133	1	Joint	Dikes	Mmc	2	Locality 3	6-01
205	46	37		Joint	Dikes	Mmc	1	Locality 3	6-01
206	53	195		Joint	Dikes	Mmc	2	Locality 3	6-01
207	70	251	4	Joint	Dikes	Mmc	2	Locality 3	6-01
208	41	171	5	Joint	Dikes	Mmc	3	Locality 3	6-01
209	37	137		Joint	Dikes	Mmc	2	Locality 3	6-01
210	72	217	3	Joint	Dikes	Mmc	1	Locality 3	6-01
211	70	176		Joint	Dikes	Mmc	1	Locality 3	6-01
212	73	0	8	Joint	Dikes	Mmc	1	Locality 3	6-01
213	83	215	3	Joint	Dikes	Mmc	1	Locality 3	6-01
214	76	299		Joint	Dikes	Mmc	1	Locality 3	6-01
215	27	179	5	Joint	Dikes	Mmc	2	Locality 3	6-01
216	80	224	3	Cleavage	Dikes	Mmc	3	Locality 3	6-01
217	82	242	3	Joint	Dikes	Trm	2	Locality 3	6-01
218	77	228	3	Joint	Dikes	Trm	3	Locality 3	6-01
219	17	228	5	Joint	Dikes	Trm	3	Locality 3	6-01
220	78	127	1	Joint	Dikes	Trm	4	Locality 3	6-01
221	37	244		Joint	Dikes	Trm	3	Locality 3	6-01
222	51	260		Fault	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01
223	28	180	5	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 3	6-01
224	68	8	8	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 3	6-01
225	77	359	8	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 3	6-01
226	75	143	1	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 3	6-01
227	29	111		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01
228	54	131	1	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01
229	20	91		Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01
230	40	250		Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01
231	75	250	4	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01
232	41	232		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01
233	8	193	5	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01
234	89	72		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01
235	78	270	4	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01
236	80	155		Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01
237	71	126	1	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01
238	84	218	3	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01
239	37	147	5	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01
240	84	25	8	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 2	6-01
241	86	309		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 2	6-01
242	51	104		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 2	6-01
243	88	345		Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
244	61	242	3	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
245	76	158		Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
246	35	175	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
247	33	170	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
248	33	170	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
249	39	75		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
250	84	118		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
251	79	67	7	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
252	16	342	6	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
253	27	193	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
254	40	216		Joint	Sidewinder	Jqmp, Jsl7	5	Locality 2	6-01
255	67	245	3	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
256	81	155		Joint	Sidewinder	Jqmp, Jsl7	5	Locality 2	6-01
257	85	218	3	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
258	79	169		Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
259	23	207	5	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
260	88	355		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
261	82	63	7	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
262	73	158		Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
263	20	3	6	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
264	22	8	6	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
265	24	186	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
266	15	296		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
267	74	45	7	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
268	71	157	1	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
269	77	163		Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
270	47	286		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
271	74	158		Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
272	75	157	1	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
273	83	65	7	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
274	24	183	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
275	66	196	2	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01
276	70	49	7	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
277	78	146	1	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
278	74	286		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
279	86	146	1	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01
280	82	138	1	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
281	88	329		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
282	40	172	5	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
283	70	101		Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
284	80	338		Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01
285	45	190		Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
286	63	181	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
287	50	303		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
288	67	2	8	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
289	62	258	4	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
290	79	111		Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
291	61	190	2	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
292	36	190	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
293	26	109		Joint	Sidewinder	Jqmp, Jsl7		Locality 2	6-01
294	71	194	2	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
295	64	135	1	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
296	35	188	5	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
297	79	136	1	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
298	25	11	6	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
299	69	195	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
300	70	336		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
301	46	179		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
302	72	189	2	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01
303	46	45		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
304	64	198	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
305	65	195	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
306	69	192	2	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
307	30	121		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
308	68	200	2	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
309	69	190	2	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01
310	20	178	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
311	57	205	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
312	60	204	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
313	53	247		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
314	22	102		Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
315	58	250	4	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
316	87	238	3	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
317	66	261	4	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
318	55	318		Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
319	72	198	2	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
320	82	192	2	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
321	69	252	4	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
322	55	314		Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
323	80	192	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
324	51	242		Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
325	65	254	4	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
326	84	308		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
327	84	197	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
328	33	10	6	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
329	82	200	2	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
330	66	253	4	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
331	65	237	3	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
332	81	320		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
333	26	215	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
334	28	20	6	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
335	27	16	6	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
336	27	10	6	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
337	64	237	3	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
338	85	327		Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
339	23	8	6	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
340	73	244	3	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01
341	21	5	6	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01
342	62	39	7	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
343	84	198	2	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
344	18	357	6	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
345	66	24	8	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
346	86	172		Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
347	70	207	2	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
348	78	194	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
349	75	186	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
350	14	84	6	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
351	74	195	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
352	69	183	2	Cleavage	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
353	12	46	6	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
354	10	25	6	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
355	75	152	1	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
356	62	249	4	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
357	75	149	1	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
358	63	248	4	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
359	85	202	2	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
360	13	27	6	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01
361	25	59	6	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01
362	76	27	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
363	59	137	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
364	66	20	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
365	57	127	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
366	86	28	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05
367	76	285		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
368	52	146	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
369	79	106		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
370	70	112		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
371	2	117	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05
372	22	55	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
373	57	163		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
374	52	171		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
375	48	169		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
376	79	6	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
377	80	195	2	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
378	73	254	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
379	58	129	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
380	17	169	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
381	74	274	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
382	75	30	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
383	54	125	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
384	39	222		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
385	79	44	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
386	11	279		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
387	19	158	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05
388	88	75		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
389	28	310		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
390	66	250	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
391	79	132	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
392	68	141	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05

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393	69	38	7	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
394	63	159		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
395	30	140	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
396	89	306		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
397	42	156		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
398	75	342		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
399	73	192	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
400	8	244		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
401	6	344	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
402	73	74		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
403	74	175		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05
404	53	230	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
405	79	247	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
406	49	133		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
407	50	151		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05
408	22	226	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
409	68	346		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
410	57	157		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
411	74	40	7	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
412	20	24	6	Joint	DIKE			Locality 1	6-05
413	58	271	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
414	69	268	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
415	16	337	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
416	73	171		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
417	75	34	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
418	11	324	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
419	14	15	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
420	54	121		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
421	82	31	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
422	68	220	3	Fault	DIKE	Jfv3		Locality 1	6-05
423	8	228		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
424	70	248	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
425	72	193	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
426	87	123		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
427	71	56	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
428	68	36	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
429	57	165		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
430	2	355	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
431	52	61		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
432	66	255	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
433	48	142		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
434	56	246		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
435	85	51	7	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
436	59	283		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05
437	40	323		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
438	75	45	7	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
439	81	267	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
440	59	218	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
441	82	23	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05

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442	60	132	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
443	74	50	7	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
444	76	143	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
445	80	45	7	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
446	39	25		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
447	80	347		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
448	78	258	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
449	20	5	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
450	83	300		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
451	86	267	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
452	81	223	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05
453	81	121	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05
454	7	308	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05
455	81	59	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05
456	84	87		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05
457	75	28	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
458	74	52	7	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
459	55	265	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
460	30	332		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
461	69	150	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
462	75	49	7	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
463	18	2	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
464	83	54	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
465	61	219	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
466	87	72		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
467	55	235	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
468	74	287		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
469	71	247	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
470	40	38		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
471	66	271	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
472	73	209	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
473	69	299		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
474	67	34	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
475	47	138		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
476	79	188	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
477	81	188	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
478	66	107		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
479	67	263	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
480	60	254	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
481	73	24	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
482	78	130	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
483	7	95	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
484	76	121	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
485	50	221		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
486	67	191	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
487	54	63		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
488	85	33	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
489	50	28		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
490	43	83		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05



ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
491	61	278	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
492	80	140	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
493	32	319		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
494	68	178	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
495	24	252		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
496	59	269	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
497	57	263	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
498	55	273		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
499	53	271		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
500	87	215		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
501	65	166		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
502	85	335		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
503	49	246		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
504	56	244	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
505	75	205	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
506	73	124	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
507	33	283		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05
508	70	228	3	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05
509	80	34	8	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05
510	76	212	2	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05
511	74	219	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05
512	80	221	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05
513	78	212	2	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05
514	45	322		Joint	Jqz	Jqz	5	Locality 1	6-05
515	39	148		Joint	Jqz	Jqz		Locality 1	6-05
516	43	329		Joint	Jqz	Jqz		Locality 1	6-05
517	45	135		Joint	Jqz	Jqz		Locality 1	6-05
518	59	342		Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
519	64	8	8	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
520	67	356		Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
521	76	126	1	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05
522	79	278	4	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05
523	78	138	1	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05
524	81	105		Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05
525	85	287		Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05
526	87	9	8	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05
527	84	202	2	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05
528	61	332		Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
529	65	348		Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
530	60	341		Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
531	63	2	8	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
532	73	7	8	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
533	73	4	8	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
534	56	215		Cleavage	Jfv lower tectonized	Jfv4l		Locality 1	6-05
535	68	198	2	Cleavage	Jfv lower tectonized	Jfv4l		Locality 1	6-05
536	70	1	8	shear zone	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
537	66	2	8	shear zone	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
538	71	204	2	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05
539	44	153		Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
540	48	342		Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
541	76	118	1	Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05
542	72	250	4	Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05
543	79	93		Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05
544	63	270	4	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05
545	30	223		Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05
546	85	47	7	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-05
547	48	1		shear zone	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
548	78	27	8	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05
549	73	33	8	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05
550	77	245	3	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
551	39	105		Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
552	83	243	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
553	50	357		shear zone	Jfv upper	Jfv4u	5	Locality 1	6-05
554	51	117		Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
555	70	247	4	shear zone	Jfv upper	Jfv4u	5	Locality 1	6-05
556	64	245	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
557	86	226	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
558	56	236	3	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05
559	79	235	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
560	84	260	4	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05
561	50	95		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
562	74	224	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
563	78	250	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
564	58	233	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
565	66	261	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
566	68	234	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
567	81	275	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
568	34	10	6	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05
569	56	212		Joint	Jqz	Jqz	3	Locality 1	6-05
570	87	266	4	Joint	Jqz	Jqz	2	Locality 1	6-05
571	42	198	5	Joint	Jqz	Jqz	3	Locality 1	6-05
572	87	228	3	Joint	Jqz	Jqz	2	Locality 1	6-05
573	51	141	1	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05
574	41	256		Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05
575	65	148	1	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-05
576	13	274		Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05
577	52	179		Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05
578	56	181		Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05
579	81	266	4	Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05
580	52	137	1	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05
581	77	260	4	shear zone	Jfv upper	Jfv4u	2	Locality 1	6-05
582	51	7		shear zone	Jfv upper	Jfv4u	4	Locality 1	6-05
583	63	328		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
584	72	226	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
585	79	247	4	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
586	79	206	2	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
587	56	309		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
588	72	222	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05

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589	63	307		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
590	57	351		shear zone	Jfv upper	Jfv4u		Locality 1	6-05
591	54	316		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
592	87	260	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
593	22	177	5	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
594	32	180	5	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
595	81	38	7	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
596	59	313		Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
597	85	248	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
598	63	241	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
599	42	101		Joint	Jfv upper	Jfv4u	2	Locality 1	6-05
600	82	258	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
601	89	55	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
602	72	229	3	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05
603	71	235	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
604	86	116		Joint	Jfv upper	Jfv4u	2	Locality 1	6-05
605	65	236	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
606	36	223		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
607	77	292		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
608	82	242	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
609	70	75		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
610	69	229	3	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
611	83	286		Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
612	24	8	6	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
613	59	224	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
614	36	287		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
615	81	235	3	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
616	82	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
617	88	320		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
618	83	230	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
619	84	128	1	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
620	46	130		Joint	Jfv upper	Jfv4u	2	Locality 1	6-05
621	86	44	7	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
622	81	320		Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
623	15	192	5	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05
624	62	231	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
625	44	259		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
626	82	257	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
627	62	210	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05
628	37	126		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05
629	72	225	3	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05
630	89	37	7	Cleavage	Jfv upper	Jfv4u	5	Locality 1	6-05
631	84	236	3	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05
632	55	5		Cleavage	Jfv upper	Jfv4u		Locality 1	6-05
633	88	35	7	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05
634	63	97		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
635	70	358	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
636	36	192	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
637	66	131	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11

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638	70	20	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
639	89	182		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
640	52	352		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
641	59	131	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
642	55	350		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
643	69	31	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
644	74	138	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
645	32	225		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
646	84	6	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
647	81	134	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
648	29	218	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
649	72	24	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
650	83	261	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
651	80	139	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
652	51	356		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
653	69	33	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
654	38	183	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
655	80	26	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
656	59	123	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
657	75	11	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
658	65	28	8	Joint	DIKE	Jfv3	5	Locality 1	6-11
659	42	213		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
660	19	256		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
661	64	90		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
662	70	135	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
663	72	19	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
664	76	34	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
665	53	276		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-11
666	73	171		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
667	56	136	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-11
668	64	286		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-11
669	81	29	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
670	65	52	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
671	76	151	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
672	62	228	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
673	71	142	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
674	40	98		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11
675	69	10	8	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
676	59	105		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
677	89	217	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
678	28	119		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
679	40	167	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
680	67	49	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
681	39	172	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
682	49	203		Joint	DIKE	Jfv3	5	Locality 1	6-11
683	60	126	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
684	80	235	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
685	86	237	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
686	77	152	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11

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687	68	255	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
688	68	171		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
689	33	51	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
690	21	139	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
691	78	113		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
692	81	223	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
693	87	122		Fault	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
694	28	153	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
695	89	295		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
696	78	26	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
697	74	247	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
698	64	122	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
699	35	44	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
700	17	45	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
701	78	130	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
702	30	143	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
703	39	235		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
704	79	112		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
705	75	24	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
706	89	106		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
707	74	26	8	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
708	71	331		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
709	89	135	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
710	37	158	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
711	22	49	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
712	89	134	1	Joint	DIKE	Jfv3	5	Locality 1	6-11
713	18	23	6	Joint	DIKE	Jfv3	5	Locality 1	6-11
714	33	351	6	Joint	DIKE	Jfv3	5	Locality 1	6-11
715	83	53	7	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
716	77	208	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
717	89	155		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11
718	76	170		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
719	72	103		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
720	22	51	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
721	40	161	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
722	63	322		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
723	66	319		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11
724	60	316		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11
725	30	20	6	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
726	78	151	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
727	70	143	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
728	74	130	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
729	77	51	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
730	56	167		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
731	71	39	7	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
732	76	61	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
733	70	319		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
734	65	127	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
735	66	52	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11

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736	8	291	6	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
737	21	10	6	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
738	74	142	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
739	88	241	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
740	65	116	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
741	52	46		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
742	67	122	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
743	71	51	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
744	66	214	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
745	61	56	7	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
746	89	149		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
747	79	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
748	45	68		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
749	70	54	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
750	62	130	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
751	18	50	6	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
752	77	40	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
753	65	134	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
754	37	262		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
755	79	259	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
756	53	128	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
757	55	41		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
758	53	146	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
759	60	43	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
760	68	41	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
761	71	154	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
762	62	39	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
763	65	70		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
764	51	156		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
765	61	113		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
766	64	48	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
767	12	206	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
768	89	205	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
769	89	16	8	Fault	Jfv upper	Jfv4u	5	Locality 1	6-11
770	73	70		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
771	42	184	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
772	59	266	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
773	49	353		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
774	82	236	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
775	82	262	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
776	78	240	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
777	73	45	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
778	24	150	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
779	77	48	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
780	67	299		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
781	69	291		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
782	36	352		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
783	75	2	8	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
784	84	243	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11

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785	60	347		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
786	81	245	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
787	83	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
788	63	339		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
789	85	275	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
790	79	11	8	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
791	58	345		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
792	70	210	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
793	89	201	2	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11
794	20	219	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
795	81	223	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
796	80	208	2	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
797	84	273	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
798	69	203	2	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11
799	53	248		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
800	78	203	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
801	79	207	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
802	61	312		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
803	81	208	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
804	84	132	1	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11
805	80	229	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
806	57	312		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
807	81	210	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
808	53	321		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
809	73	192	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
810	57	304		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
811	82	140	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
812	84	34	7	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11
813	20	291		Joint	DIKE	Jfv4u	5	Locality 1	6-11
814	65	323		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
815	75	153	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
816	58	145	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
817	49	148		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
818	84	51	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
819	82	243	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
820	69	206	2	Joint	DIKE	Jfv4u	5	Locality 1	6-11
821	82	79		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
822	82	241	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
823	79	224	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
824	81	125	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
825	20	264		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
826	77	211	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
827	53	337		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
828	79	219	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11
829	42	337		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
830	82	249	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
831	84	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
832	23	267		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
833	51	223		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11



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834	89	14	8	Fault	Jfv upper	Jfv4u	5	Locality 1	6-11
835	59	311		Bedding	Jfv upper	Jfv4u	4	Locality 1	6-11
836	62	287		Bedding	Jfv upper	Jfv4u	2	Locality 1	6-11
837	81	211	2	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11
838	34	248		Plane Type 1	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11
839	53	135	1	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11
840	68	212	2	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11
841	67	294		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
842	88	218	7	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
843	81	320		Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11
844	57	241	3	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
845	76	69	7	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
846	77	294		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
847	83	317		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
848	74	295		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
849	49	226		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
850	67	195	2	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
851	74	240	3	Joint	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11
852	70	330		Joint	Intrusive blkgy gry felds andes?	Jqmp	2	Locality 1	6-11
853	82	69	7	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11
854	79	139	1	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11
855	22	286		Joint	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11
856	80	224	3	Joint	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11
857	69	151	1	Joint	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11
858	81	259	4	Joint	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11
859	65	141	1	Joint	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11
860	9	23	6	Joint	Intrusive blkgy gry felds andes?	Jqmp	2	Locality 1	6-11
861	67	137	1	Joint	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11
862	17	172	5	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11
863	76	7	8	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11
864	52	216		Joint	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11
865	41	142		Fault	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11
866	64	199	2	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11
867	14	25	6	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11
868	72	124	1	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11
869	18	167	5	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11
870	54	87		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
871	85	25	8	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
872	77	41	7	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
873	61	131	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
874	85	66	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
875	77	328		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
876	29	62	6	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
877	20	78	6	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
878	17	239		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
879	82	151	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
880	86	69		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
881	58	234	3	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11
882	75	70		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11

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883	16	96		Joint	Jfv upper	Jfv4u	2	Locality 1	6-11
884	77	213	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
885	88	127	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
886	29	94		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
887	69	102		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
888	66	224	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
889	72	202	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
890	78	194	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
891	76	55	7	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
892	41	131		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
893	46	244		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
894	41	169	5	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
895	87	70		Fault	Jfv upper	Jfv4u	5	Locality 1	6-11
896	48	152		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
897	71	210	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
898	70	17	8	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
899	25	134	5	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
900	81	217	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
901	43	180	5	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11
902	26	135	5	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11
903	58	329		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
904	81	111		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
905	82	246	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
906	72	128	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
907	70	332		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
908	64	229	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
909	64	63	7	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
910	30	140	5	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
911	86	54	7	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
912	82	204	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
913	77	316		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
914	30	137	5	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
915	76	5	8	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
916	81	321		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
917	24	124		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
918	69	326		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
919	75	220	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
920	58	218	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
921	89	27	8	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
922	58	310		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
923	81	228	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
924	70	192	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
925	55	104		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
926	85	76		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
927	61	143	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
928	62	335		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
929	55	255	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
930	19	350	6	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
931	88	41	7	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11

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932	88	61	7	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11
933	66	244	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
934	80	238	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
935	68	271	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
936	68	117	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
937	66	83		Joint	Jfv upper	Jfv4u	2	Locality 1	6-11
938	79	239	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
939	79	65	7	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
940	54	166		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
941	74	236	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
942	78	279	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
943	64	126	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
944	70	344		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
945	66	150	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
946	66	294		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
947	70	103		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
948	52	49		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
949	75	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
950	60	128	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
951	65	129	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
952	76	91		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
953	58	39		Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11
954	62	156		Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11
955	76	251	4	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
956	54	231	3	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11
957	70	239	3	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11
958	81	107		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
959	62	238	3	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11
960	61	215	3	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
961	69	261	4	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11
962	72	111		Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11
963	63	247	4	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11
964	74	251	4	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11
965	76	229	3	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11
966	38	166	5	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11
967	27	8	6	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
968	70	67	7	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
969	45	346		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
970	82	230	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
971	58	91		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
972	76	127	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
973	86	77		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
974	37	347		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
975	54	238	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
976	80	218	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
977	27	342	6	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
978	68	209	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
979	79	115		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11
980	77	243	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
981	35	350		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
982	81	32	8	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
983	89	186	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
984	78	18	8	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
985	75	212	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
986	48	351		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11
987	66	139	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11
988	86	51	7	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-12
989	74	219	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-12
990	74	353		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
991	11	186	5	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
992	77	228	3	Fault	Jfv upper	Jfv4u	5	Locality 1	6-12
993	83	83		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
994	52	0		Joint	Jfv upper	Jfv4u		Locality 1	6-12
995	83	198	2	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
996	7	173	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
997	41	38		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
998	86	108		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
999	81	67	7	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
1000	60	139	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
1001	18	146	5	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12
1002	68	153	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1003	34	306		Joint	Jfv upper	Jfv4u	2	Locality 1	6-12
1004	64	75		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12
1005	80	275	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1006	47	76		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1007	41	271		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
1008	82	61	7	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
1009	55	120		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12
1010	58	109		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1011	37	309		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1012	57	268	4	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
1013	61	144	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12
1014	49	123		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1015	89	183		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
1016	74	108		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1017	80	291		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
1018	73	144	1	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12
1019	69	164		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1020	59	307		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1021	82	15	8	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1022	46	289		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12
1023	65	166		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12
1024	46	68		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1025	54	290		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1026	79	188	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12
1027	61	303		Fault	Jfv upper	Jfv4u	4	Locality 1	6-12
1028	72	241	3	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12
1029	45	338		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
1030	59	286		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12
1031	80	321		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1032	86	245	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1033	86	212	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12
1034	88	163		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12
1035	39	178	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1036	55	230	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1037	34	151	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1038	51	334		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1039	74	41	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1040	25	16	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1041	84	332		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1042	60	229	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1043	56	153		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1044	68	115	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1045	32	214	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1046	34	1	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1047	66	32	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1048	29	185	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1049	74	46	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1050	80	151	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1051	61	14	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1052	25	34	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1053	67	100		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1054	21	196	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1055	32	196	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1056	76	351		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1057	19	149	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1058	81	10	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1059	70	136	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1060	68	40	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1061	70	92		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1062	79	139	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1063	44	176	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1064	67	29	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1065	70	155	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1066	53	25		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1067	76	39	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1068	45	185		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1069	72	353		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1070	69	43	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1071	74	195	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1072	71	136	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1073	28	153	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1074	73	331		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1075	44	242		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1076	48	149		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1077	73	240	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1078	72	46	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
1079	64	96		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1080	44	266		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1081	33	169	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1082	61	10	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1083	60	141	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1084	69	7	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1085	74	271	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1086	78	51	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1087	75	184	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1088	29	197	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1089	28	224		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1090	76	49	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1091	81	119	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1092	29	169	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1093	73	18	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1094	66	82		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1095	31	271		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1096	66	136	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1097	89	48	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1098	81	152	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1099	28	164	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1100	77	235	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1101	34	154	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1102	72	288		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1103	79	52	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1104	74	43	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1105	70	145	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1106	32	182	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1107	87	33	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1108	59	132	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1109	72	287		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1110	24	176	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1111	68	146	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1112	82	46	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1113	75	91		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1114	43	137		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1115	76	86		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1116	28	183	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1117	72	136	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1118	71	169		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1119	23	170	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1120	35	261		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1121	25	186	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1122	82	49	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1123	76	62	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1124	67	141	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1125	83	49	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1126	34	163	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1127	76	80		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12

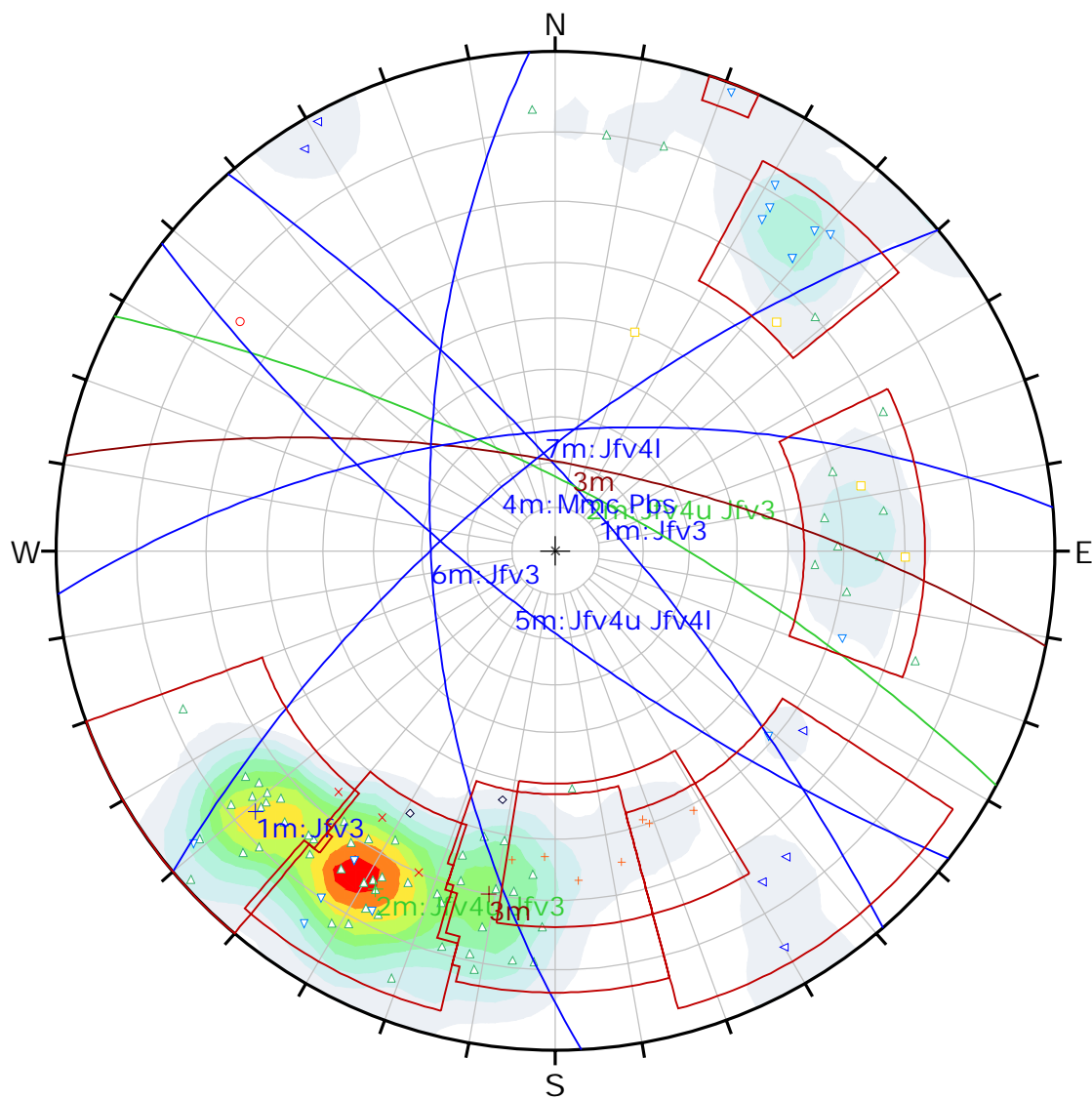
ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
1128	76	154	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	32	Locality 1	6-12
1129	73	48	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1130	24	145	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1131	65	138	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1132	49	261		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1133	81	32	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1134	81	210	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1135	78	127	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1136	88	13	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1137	3	11	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1138	33	170	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1139	73	236	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1140	78	139	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1141	63	161		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1142	69	79		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1143	25	189	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1144	63	120	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1145	58	149	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1146	26	188	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1147	81	264	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1148	69	252	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1149	52	161		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1150	75	54	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1151	76	51	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1152	84	238	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1153	82	43	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1154	70	139	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1155	14	150	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1156	83	333		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1157	78	67	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1158	77	85		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1159	14	215	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1160	22	195	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1161	52	132	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1162	59	227	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1163	74	100		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1164	14	158	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1165	71	180	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1166	78	28	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1167	71	35	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1168	84	6	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1169	18	212	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1170	62	132	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1171	79	3	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1172	4	142		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1173	71	138	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1174	69	16	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1175	81	11	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1176	56	134	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12



ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
1177	3	117	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1178	32	146	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1179	74	173		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1180	31	298		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1181	48	139		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1182	72	263	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1183	17	207	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1184	78	188	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1185	80	187	2	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1186	87	174		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1187	34	189	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1188	25	179	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1189	16	84	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1190	66	243	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1191	73	20	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1192	78	26	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1193	57	204	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1194	14	124		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1195	76	262	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1196	24	168	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1197	69	129	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1198	89	7	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1199	20	191	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1200	26	33	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1201	80	187	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1202	22	193	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1203	87	3	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1204	68	122	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1205	27	15	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1206	83	131	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1207	15	206	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1208	57	15	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1209	79	12	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1210	21	5	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1211	27	200	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1212	75	130	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1213	88	194	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1214	24	194	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1215	83	122	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1216	58	152	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1217	80	135	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1218	14	200	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1219	81	343		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1220	74	18	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1221	74	2	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1222	75	262	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1223	28	158	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1224	66	4	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1225	13	170	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
1226	76	130	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1227	31	194	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1228	87	27	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1229	77	268	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1230	79	16	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1231	84	296		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1232	62	183	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1233	66	258	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1234	74	108		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1235	22	196	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1236	67	131	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1237	56	278		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1238	14	174	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1239	71	119	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1240	65	17	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1241	75	129	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1242	64	185	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1243	20	110		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1244	66	42	7	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	5	Locality 1	6-12
1245	76	185	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1246	85	158		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	4	Locality 1	6-12
1247	68	140	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1248	65	33	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	5	Locality 1	6-12
1249	9	206	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1250	57	185	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1251	56	300		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	4	Locality 1	6-12
1252	70	23	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	5	Locality 1	6-12
1253	25	269		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1254	77	127	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1255	81	180	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1256	13	292		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1257	73	29	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1258	65	140	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1259	57	317		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1260	75	155	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1261	57	294		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1262	66	57	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1263	23	17	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1264	76	189	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1265	76	151	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1266	84	27	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1267	10	33	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1268	82	188	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1269	8	0	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1270	51	143	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1271	66	174		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1272	23	259		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1273	83	177		Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1274	57	170		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE
1275	55	137	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1276	18	208	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1277	84	70		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1278	12	28	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1279	66	148	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1280	60	148	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1281	84	197	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1282	86	317		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1283	68	73		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1284	24	165	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1285	48	197		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1286	78	146	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1287	62	143	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1288	21	173	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1289	53	342		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1290	65	156	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12
1291	84	162		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12
1292	85	21	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1293	66	174		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1294	44	148		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1295	19	189	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1296	40	297		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1297	74	29	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1298	67	296		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1299	87	14	8	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1300	38	209		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1301	73	28	8	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12
1302	69	143	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1303	59	108		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1304	65	147	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1305	31	188	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12
1306	31	337		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1307	84	55	7	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12
1308	61	165		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12
1309	21	197	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12



Symbol	BROWN UNIT	Quantity
◇	Jfv1, Jfv2	2
×	Jfv2	3
△	Jfv3	62
+	Jfv4l	7
▽	Jfv4u	15
□	Mmc	4
◁	Mmc, Pbs	6
○	Trm	1

Color	Density Concentrations
	0.00 - 1.60
	1.60 - 3.20
	3.20 - 4.80
	4.80 - 6.40
	6.40 - 8.00
	8.00 - 9.60
	9.60 - 11.20
	11.20 - 12.80
	12.80 - 14.40
	14.40 - 16.00

Contour Data	Pole Vectors
Maximum Density	15.72%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	100 (100 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Project Area

Drawn By

Terracon

Author

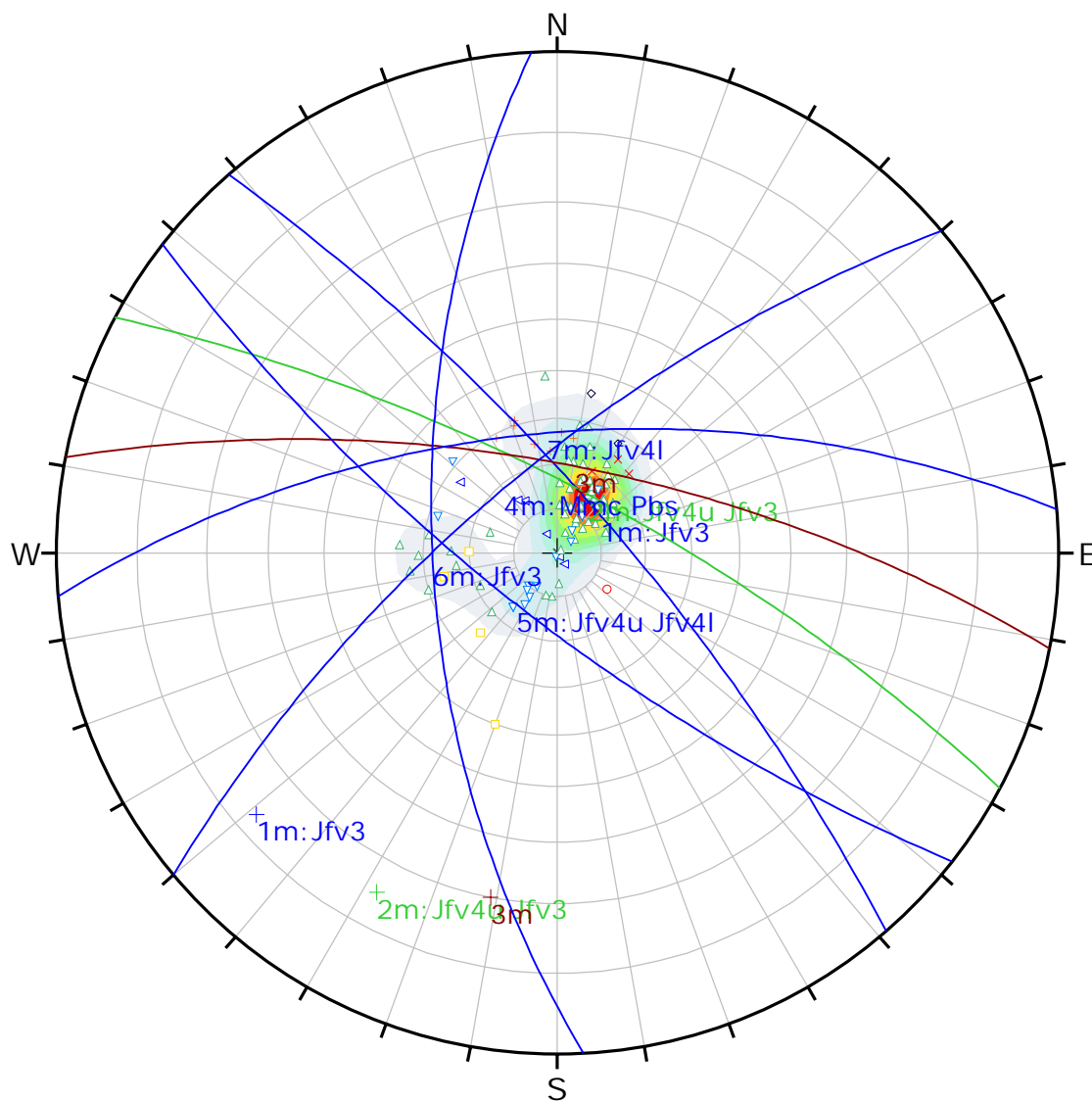
JMc

File Name

Cemex bedding Data.dips7

Date

7/2/2020



Symbol	BROWN UNIT	Quantity
◇	Jfv1, Jfv2	2
×	Jfv2	3
△	Jfv3	62
+	Jfv4l	7
▽	Jfv4u	15
□	Mmc	4
◁	Mmc, Pbs	6
○	Trm	1

Color	Density Concentrations
	0.00 - 3.60
	3.60 - 7.20
	7.20 - 10.80
	10.80 - 14.40
	14.40 - 18.00
	18.00 - 21.60
	21.60 - 25.20
	25.20 - 28.80
	28.80 - 32.40
	32.40 - 36.00

Contour Data	Dip Vectors
Maximum Density	35.32%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Dip Vectors
Vector Count	100 (100 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Project Area

Drawn By

Terracon

Author

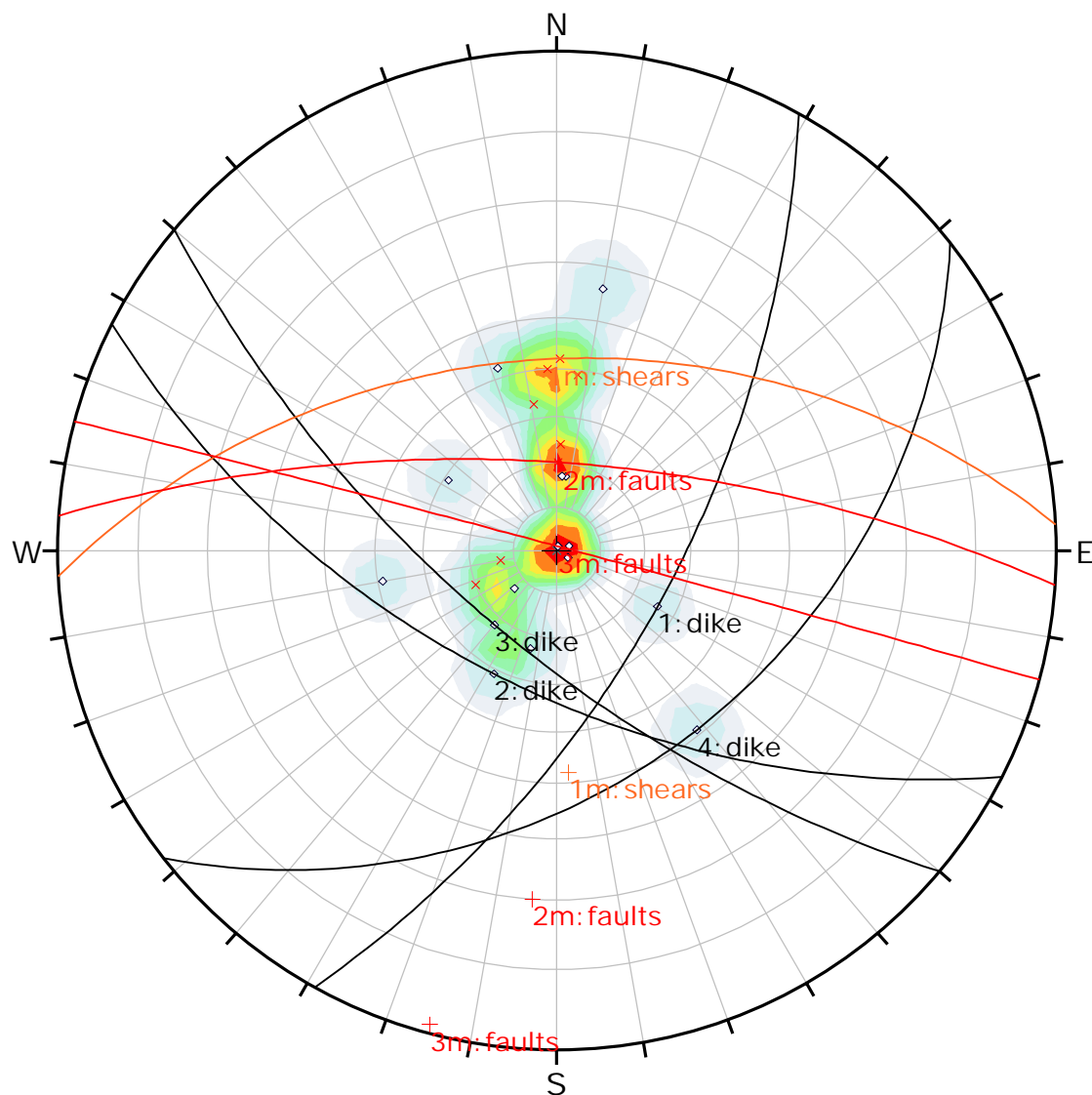
JMc

File Name

Cemex bedding Data.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Fault	16
×	shear zone	8

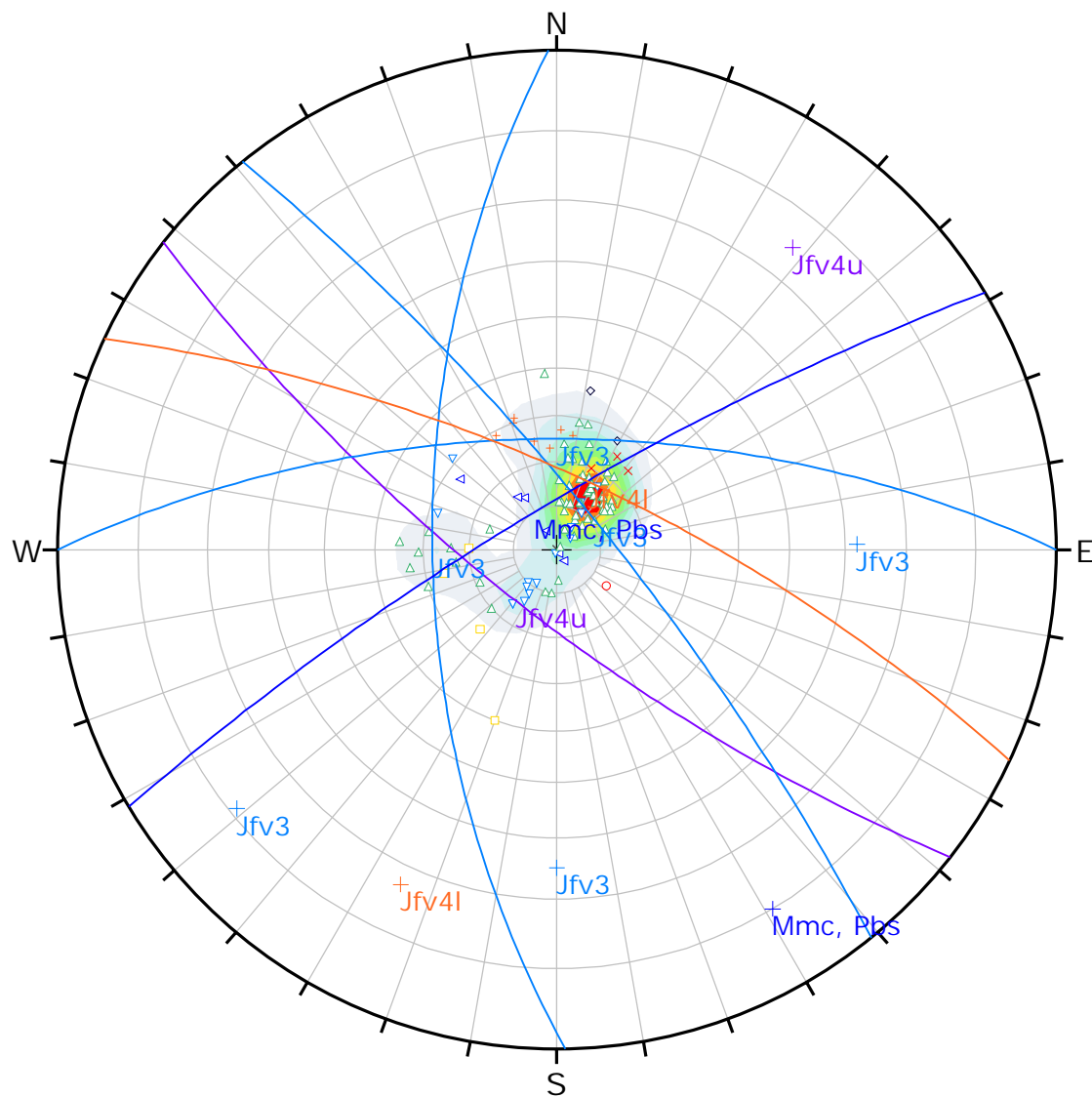
Color	Density Concentrations
	0.00 - 1.70
	1.70 - 3.40
	3.40 - 5.10
	5.10 - 6.80
	6.80 - 8.50
	8.50 - 10.20
	10.20 - 11.90
	11.90 - 13.60
	13.60 - 15.30
	15.30 - 17.00

Contour Data	Dip Vectors
Maximum Density	16.48%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Dip Vectors
Vector Count	24 (24 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project	Cemex Wht/Blk Mtn		
Analysis Description	Black Mtn Project Area		
Drawn By	Terracon	Author	JMc
File Name	Cemex fault and shears Data.dips7	Date	7/2/2020



Symbol	BROWN UNIT	Quantity
◇	Jfv1, Jfv2	2
×	Jfv2	3
△	Jfv3	62
+	Jfv4l	7
▽	Jfv4u	15
□	Mmc	4
◁	Mmc, Pbs	6
○	Trm	1

Color	Density Concentrations
	0.00 - 3.60
	3.60 - 7.20
	7.20 - 10.80
	10.80 - 14.40
	14.40 - 18.00
	18.00 - 21.60
	21.60 - 25.20
	25.20 - 28.80
	28.80 - 32.40
	32.40 - 36.00

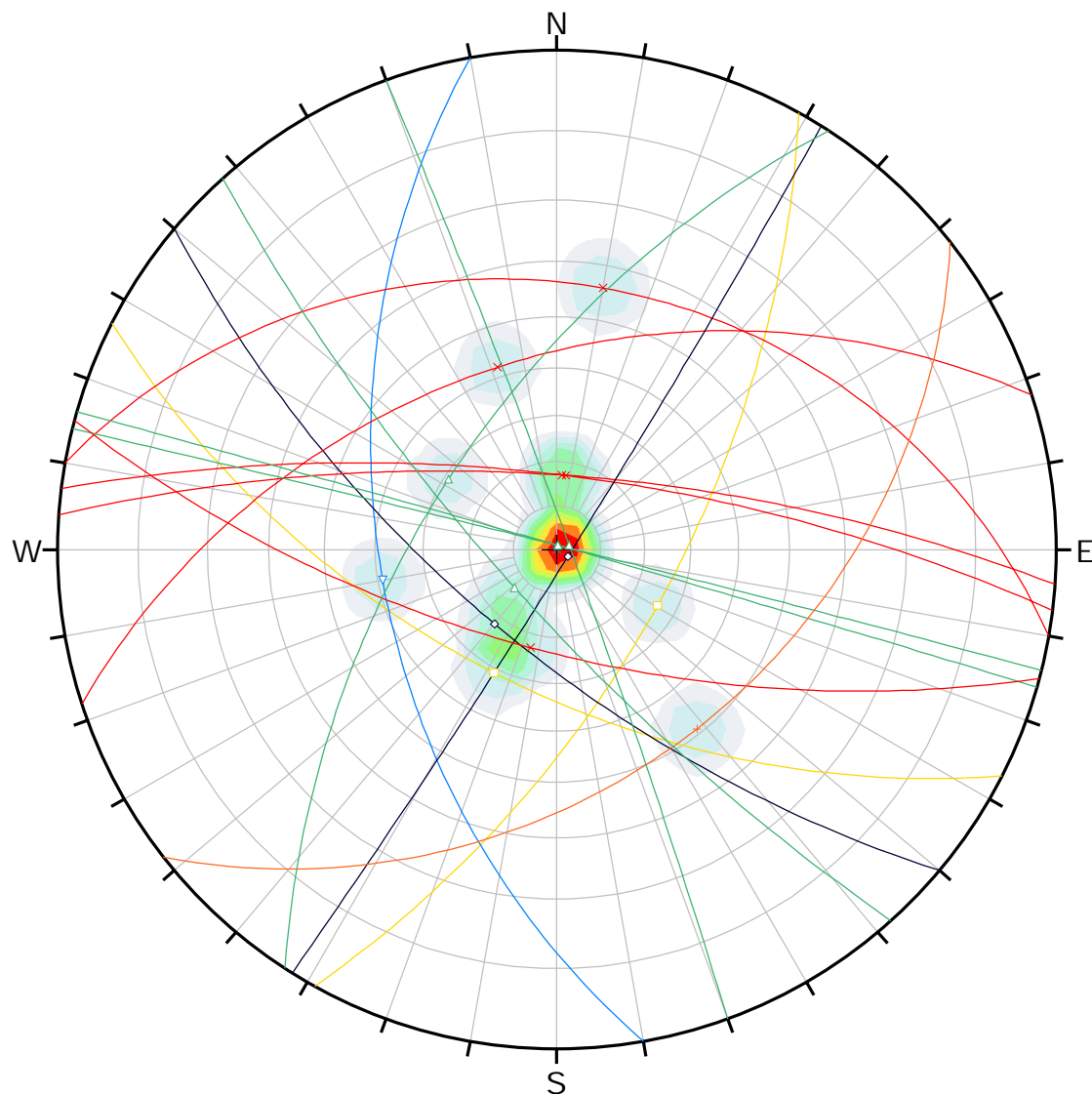
Contour Data	Dip Vectors
Maximum Density	35.32%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Dip Vectors
Vector Count	100 (100 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	Black Mtn Bedding		
Drawn By	Terracon	Author	JMc
File Name	Cemex BIK Wht bedding vectors.dips7	Date	6/19/2020



Symbol	BROWN UNIT	Quantity
◇	Jfv3	2
×	Jfv4l	5
△	Jfv4u	5
+	Jqmp	1
▽	Mmc, Pbs	1
□	[no data]	2

Color	Density Concentrations
	0.00 - 2.50
	2.50 - 5.00
	5.00 - 7.50
	7.50 - 10.00
	10.00 - 12.50
	12.50 - 15.00
	15.00 - 17.50
	17.50 - 20.00
	20.00 - 22.50
	22.50 - 25.00

Contour Data	Dip Vectors
Maximum Density	24.61%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Dip Vectors
Vector Count	16 (16 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Faults

Drawn By

Terracon

Author

JMc

File Name

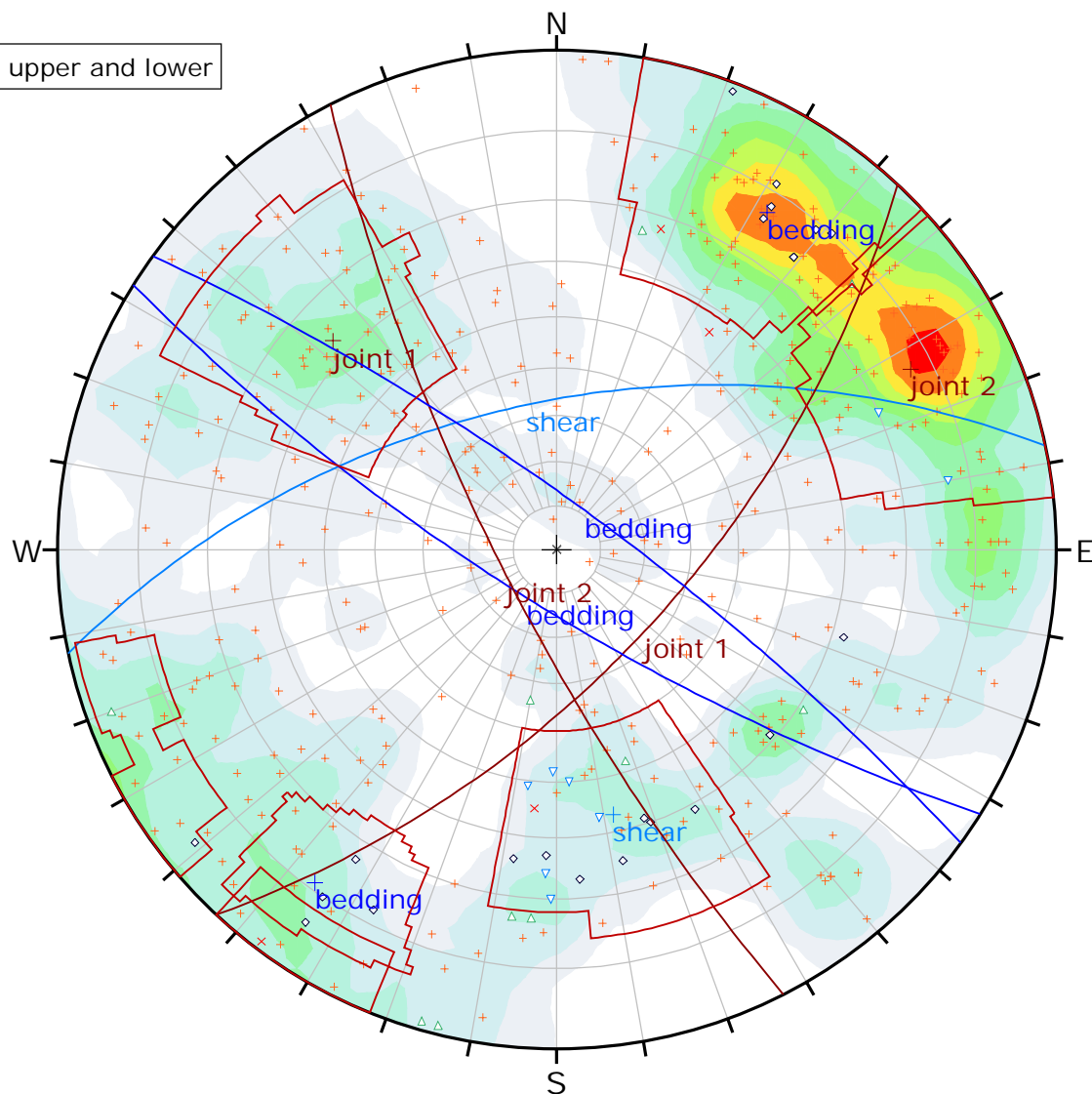
Cemex Blk Wht data faults.dips7

Date

6/19/2020



Jfv4 upper and lower



Symbol	TYPE	Quantity
◇	Bedding	22
×	Cleavage	4
△	Fault	10
+	Joint	364
▽	shear zone	8

Color	Density Concentrations
	0.00 - 0.50
	0.50 - 1.00
	1.00 - 1.50
	1.50 - 2.00
	2.00 - 2.50
	2.50 - 3.00
	3.00 - 3.50
	3.50 - 4.00
	4.00 - 4.50
	4.50 - 5.00

Contour Data	Pole Vectors
Maximum Density	4.78%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	408 (408 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Jfv4 upper and lower

Drawn By

Terracon

Author

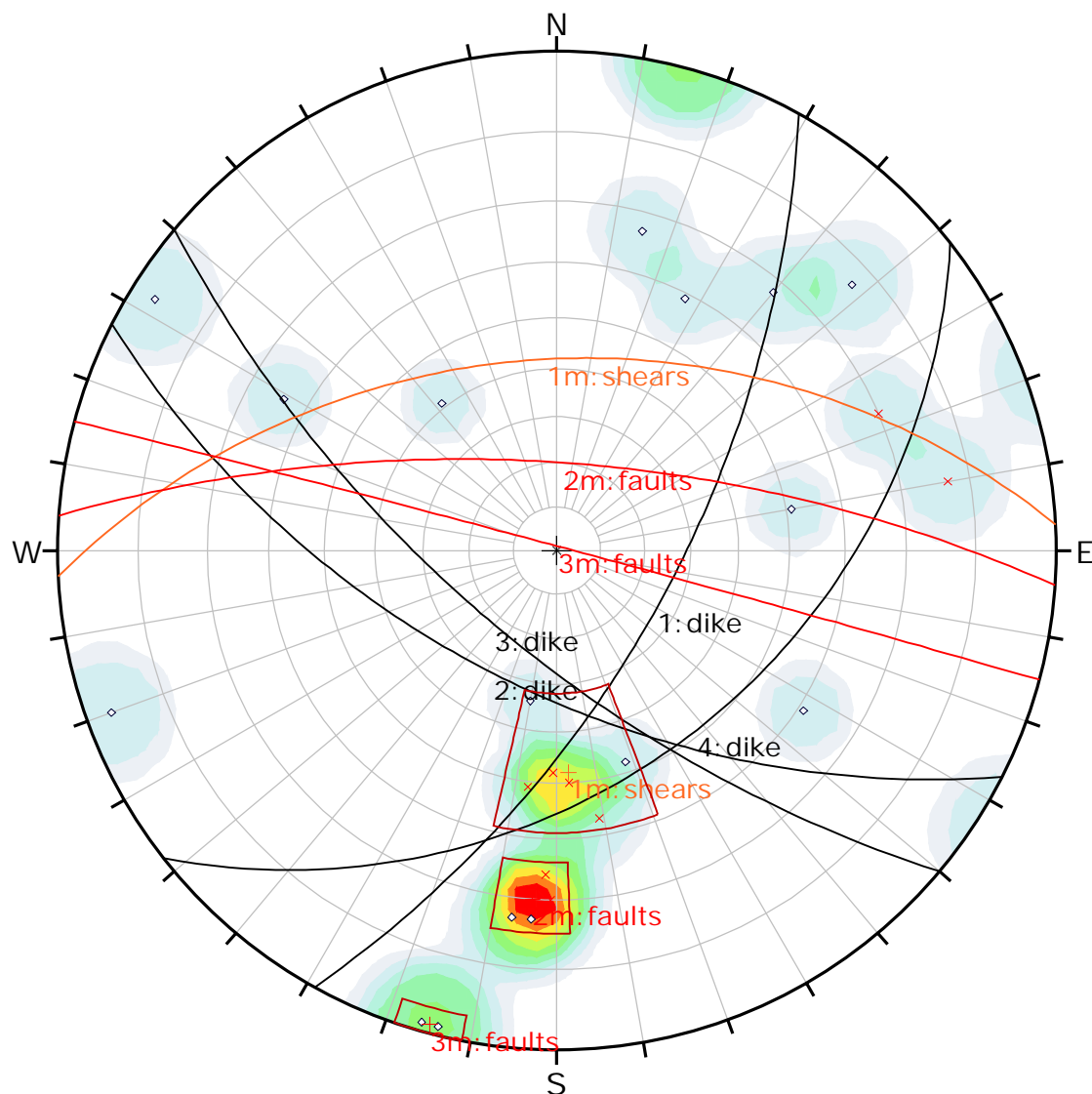
JMc

File Name

Cemex Blk Wht data Jfvu\_Jfvl.dips7

Date

6/19/2020



Symbol	TYPE	Quantity
◇	Fault	16
×	shear zone	8

Color	Density Concentrations
	0.00 - 1.60
	1.60 - 3.20
	3.20 - 4.80
	4.80 - 6.40
	6.40 - 8.00
	8.00 - 9.60
	9.60 - 11.20
	11.20 - 12.80
	12.80 - 14.40
	14.40 - 16.00

Contour Data	Pole Vectors
Maximum Density	15.58%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	24 (24 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Project Area

Drawn By

Terracon

Author

JMc

File Name

Cemex fault and shears Data.dips7

Date

7/2/2020

## Black Mtn. Area Data

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
1	80	34	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	8
2	76	212	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	2
3	74	219	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	3
4	80	221	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	3
5	78	212	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	2
6	45	322	Joint	Jqz	Jqz	5	Locality 1	6-05	
7	39	148	Joint	Jqz	Jqz		Locality 1	6-05	
8	43	329	Joint	Jqz	Jqz		Locality 1	6-05	
9	45	135	Joint	Jqz	Jqz		Locality 1	6-05	
10	59	342	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
11	64	8	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
12	67	356	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
13	76	126	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	1
14	79	278	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	4
15	78	138	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	1
16	81	105	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	
17	85	287	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	
18	87	9	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	8
19	84	202	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	2
20	61	332	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
21	65	348	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
22	60	341	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
23	63	2	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
24	73	7	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
25	73	4	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
26	56	215	Cleavage	Jfv lower tectonized	Jfv4l		Locality 1	6-05	
27	68	198	Cleavage	Jfv lower tectonized	Jfv4l		Locality 1	6-05	2
28	70	1	shear zone	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
29	66	2	shear zone	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
30	71	204	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	2
31	44	153	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05	
32	48	342	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
33	76	118	Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	1
34	72	250	Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	4
35	79	93	Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05	
36	63	270	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05	4
37	30	223	Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05	
38	85	47	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-05	7
39	48	1	shear zone	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
40	78	27	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	8
41	73	33	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	8
42	77	245	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	3
43	39	105	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	
44	83	243	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
45	50	357	shear zone	Jfv upper	Jfv4u	5	Locality 1	6-05	
46	51	117	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	
47	70	247	shear zone	Jfv upper	Jfv4u	5	Locality 1	6-05	4
48	64	245	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
49	86	226	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
50	56	236	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	3
51	79	235	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
52	84	260	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	4
53	50	95	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
54	74	224	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
55	78	250	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	4
56	58	233	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
57	66	261	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4
58	68	234	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
59	81	275	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	4
60	34	10	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	6
61	56	212	Joint	Jqz	Jqz	3	Locality 1	6-05	
62	87	266	Joint	Jqz	Jqz	2	Locality 1	6-05	4
63	42	198	Joint	Jqz	Jqz	3	Locality 1	6-05	5
64	87	228	Joint	Jqz	Jqz	2	Locality 1	6-05	3
65	51	141	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05	1
66	41	256	Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05	
67	65	148	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-05	1
68	13	274	Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	
69	52	179	Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	
70	56	181	Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	
71	81	266	Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05	4
72	52	137	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05	1
73	77	260	shear zone	Jfv upper	Jfv4u	2	Locality 1	6-05	4
74	51	7	shear zone	Jfv upper	Jfv4u	4	Locality 1	6-05	
75	63	328	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
76	72	226	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	3
77	79	247	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	4
78	79	206	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	2
79	56	309	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
80	72	222	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	3
81	63	307	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
82	57	351	shear zone	Jfv upper	Jfv4u		Locality 1	6-05	
83	54	316	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
84	87	260	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4
85	22	177	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	5
86	32	180	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	5
87	81	38	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	7
88	59	313	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	
89	85	248	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4
90	63	241	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	3
91	42	101	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	
92	82	258	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	4
93	89	55	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	7
94	72	229	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	3
95	71	235	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	3
96	86	116	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	
97	65	236	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
98	36	223	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
99	77	292	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
100	82	242	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
101	70	75	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
102	69	229	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	3
103	83	286	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	
104	24	8	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	6
105	59	224	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
106	36	287	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
107	81	235	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	3
108	82	269	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4
109	88	320	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
110	83	230	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
111	84	128	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	1
112	46	130	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	
113	86	44	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	7
114	81	320	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	
115	15	192	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	5
116	62	231	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
117	44	259	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
118	82	257	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4
119	62	210	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	2
120	37	126	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
121	72	225	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	3
122	89	37	Cleavage	Jfv upper	Jfv4u	5	Locality 1	6-05	7
123	84	236	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	3
124	55	5	Cleavage	Jfv upper	Jfv4u		Locality 1	6-05	
125	88	35	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	7
126	30	20	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
127	78	151	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
128	70	143	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
129	74	130	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
130	77	51	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
131	56	167	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
132	71	39	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
133	76	61	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
134	70	319	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
135	65	127	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
136	66	52	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
137	8	291	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
138	21	10	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	6
139	74	142	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
140	88	241	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
141	65	116	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
142	52	46	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
143	67	122	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	1
144	71	51	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
145	66	214	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
146	61	56	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
147	89	149	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
148	79	269	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
149	45	68	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
150	70	54	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
151	62	130	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
152	18	50	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	6
153	77	40	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
154	65	134	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
155	37	262	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
156	79	259	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
157	53	128	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
158	55	41	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
159	53	146	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
160	60	43	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
161	68	41	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
162	71	154	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
163	62	39	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
164	65	70	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
165	51	156	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
166	61	113	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
167	64	48	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
168	12	206	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	5
169	89	205	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	2
170	89	16	Fault	Jfv upper	Jfv4u	5	Locality 1	6-11	8
171	73	70	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
172	42	184	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	5
173	59	266	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
174	49	353	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
175	82	236	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
176	82	262	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
177	78	240	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
178	73	45	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
179	24	150	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	5
180	77	48	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
181	67	299	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
182	69	291	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
183	36	352	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
184	75	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	8
185	84	243	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
186	60	347	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
187	81	245	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
188	83	269	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
189	63	339	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
190	85	275	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
191	79	11	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	8
192	58	345	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
193	70	210	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
194	89	201	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11	2
195	20	219	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	5
196	81	223	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3



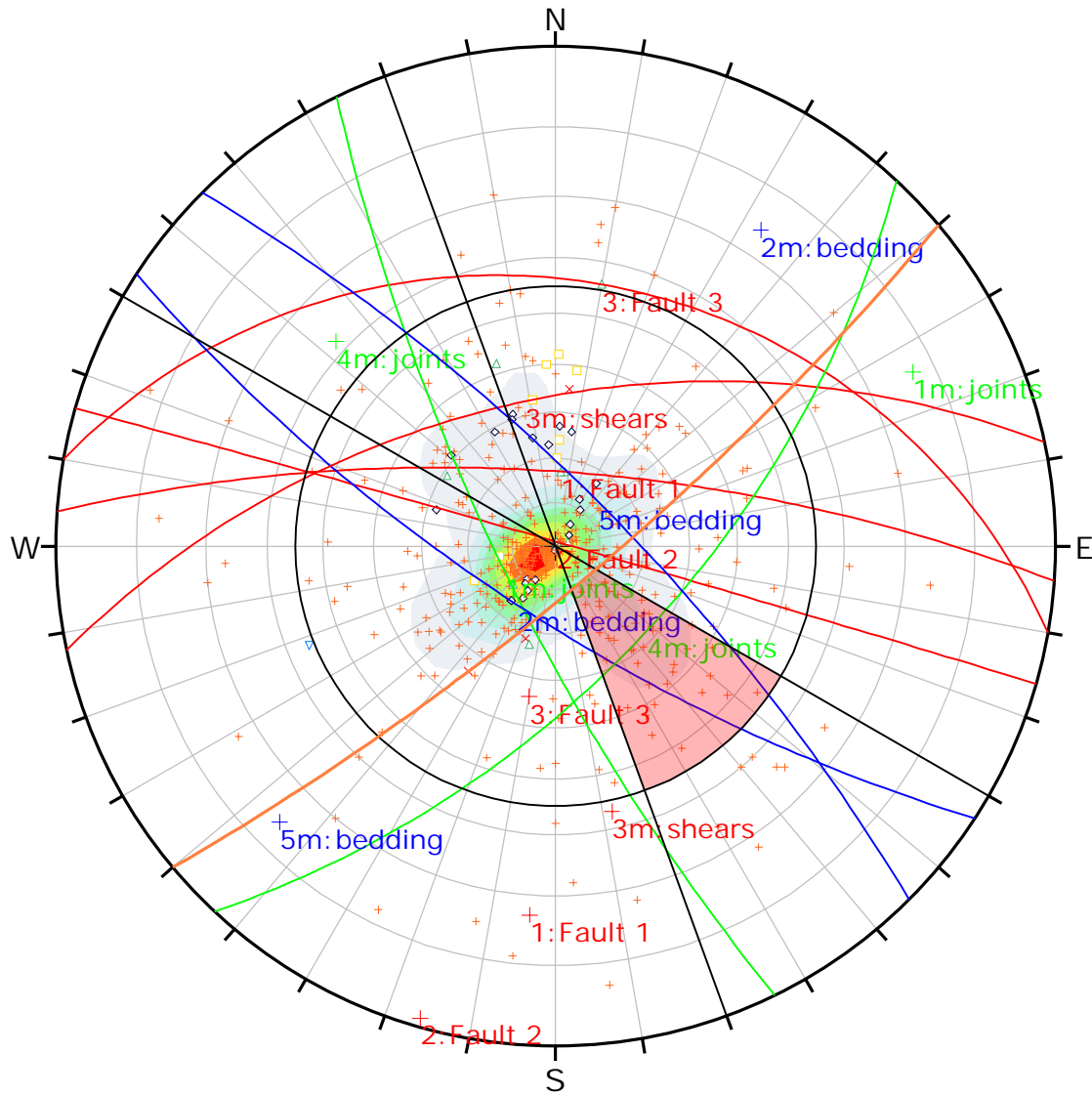
ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
197	80	208	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	2
198	84	273	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
199	69	203	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	2
200	53	248	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
201	78	203	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
202	79	207	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
203	61	312	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
204	81	208	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
205	84	132	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	1
206	80	229	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
207	57	312	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
208	81	210	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
209	53	321	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
210	73	192	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
211	57	304	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
212	82	140	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
213	84	34	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11	7
214	20	291	Joint	DIKE	Jfv4u	5	Locality 1	6-11	
215	65	323	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
216	75	153	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	1
217	58	145	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
218	49	148	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
219	84	51	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
220	82	243	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
221	69	206	Joint	DIKE	Jfv4u	5	Locality 1	6-11	2
222	82	79	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
223	82	241	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
224	79	224	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
225	81	125	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
226	20	264	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
227	77	211	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	2
228	53	337	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
229	79	219	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11	3
230	42	337	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
231	82	249	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
232	84	269	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
233	23	267	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
234	51	223	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
235	89	14	Fault	Jfv upper	Jfv4u	5	Locality 1	6-11	8
236	59	311	Bedding	Jfv upper	Jfv4u	4	Locality 1	6-11	
237	62	287	Bedding	Jfv upper	Jfv4u	2	Locality 1	6-11	
238	81	211	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11	2
239	34	248	Plane Type 1	Intrusive blkly gry felds andes?	Jqmp	5	Locality 1	6-11	
240	53	135	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	1
241	68	212	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	2
242	67	294	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
243	88	218	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	7
244	81	320	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	
245	57	241	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	3

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
246	76	69	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	7
247	77	294	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
248	83	317	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
249	74	295	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
250	49	226	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
251	67	195	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	2
252	18	167	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	5
253	54	87	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
254	85	25	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	8
255	77	41	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
256	61	131	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
257	85	66	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
258	77	328	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
259	29	62	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
260	20	78	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
261	17	239	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
262	82	151	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
263	86	69	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
264	58	234	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	3
265	75	70	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
266	16	96	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	
267	77	213	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
268	88	127	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
269	29	94	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
270	69	102	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
271	66	224	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
272	72	202	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
273	78	194	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
274	76	55	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
275	41	131	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
276	46	244	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
277	41	169	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	5
278	87	70	Fault	Jfv upper	Jfv4u	5	Locality 1	6-11	
279	48	152	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
280	71	210	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
281	70	17	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	8
282	25	134	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	5
283	81	217	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
284	43	180	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	5
285	26	135	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	5
286	58	329	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
287	81	111	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
288	82	246	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
289	72	128	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
290	70	332	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
291	64	229	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
292	64	63	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
293	30	140	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	5
294	86	54	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	7

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
295	82	204	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
296	77	316	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
297	30	137	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	5
298	76	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	8
299	81	321	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
300	24	124	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
301	69	326	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
302	75	220	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
303	58	218	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
304	89	27	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	8
305	58	310	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
306	81	228	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
307	70	192	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	2
308	55	104	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
309	85	76	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
310	61	143	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	1
311	62	335	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
312	55	255	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
313	19	350	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	6
314	88	41	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
315	88	61	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	7
316	66	244	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
317	80	238	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
318	68	271	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
319	68	117	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
320	66	83	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	
321	79	239	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
322	79	65	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
323	54	166	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
324	74	236	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
325	78	279	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
326	64	126	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
327	70	344	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
328	66	150	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
329	66	294	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
330	70	103	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
331	52	49	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
332	75	269	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
333	60	128	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
334	65	129	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	1
335	76	91	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
336	58	39	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11	
337	62	156	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	
338	76	251	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	4
339	54	231	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	3
340	70	239	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	3
341	81	107	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
342	62	238	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	3
343	61	215	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	3

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
344	69	261	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	4
345	72	111	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	
346	63	247	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	4
347	74	251	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11	4
348	76	229	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11	3
349	38	166	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11	5
350	27	8	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	6
351	70	67	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	7
352	45	346	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
353	82	230	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
354	58	91	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
355	76	127	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
356	86	77	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
357	37	347	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
358	54	238	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
359	80	218	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
360	27	342	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
361	68	209	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
362	79	115	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
363	77	243	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
364	35	350	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
365	81	32	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	8
366	89	186	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
367	78	18	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	8
368	75	212	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
369	48	351	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
370	66	139	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
371	86	51	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-12	7
372	74	219	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-12	3
373	74	353	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	
374	11	186	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	5
375	77	228	Fault	Jfv upper	Jfv4u	5	Locality 1	6-12	3
376	83	83	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
377	52	0	Joint	Jfv upper	Jfv4u		Locality 1	6-12	
378	83	198	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	2
379	7	173	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	5
380	41	38	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
381	86	108	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
382	81	67	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	7
383	60	139	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	1
384	18	146	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12	5
385	68	153	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	1
386	34	306	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12	
387	64	75	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	
388	80	275	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	4
389	47	76	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
390	41	271	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	
391	82	61	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	7
392	55	120	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
393	58	109	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
394	37	309	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
395	57	268	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	4
396	61	144	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	1
397	49	123	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
398	89	183	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	
399	74	108	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
400	80	291	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	
401	73	144	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12	1
402	69	164	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
403	59	307	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
404	82	15	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	8
405	46	289	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	
406	65	166	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	
407	46	68	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
408	54	290	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
409	79	188	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	2
410	61	303	Fault	Jfv upper	Jfv4u	4	Locality 1	6-12	
411	72	241	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12	3
412	45	338	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
413	59	286	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	
414	80	321	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
415	86	245	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	3
416	86	212	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	2
417	88	163	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	



Symbol	TYPE	Quantity
◇	Bedding	22
×	Cleavage	4
△	Fault	10
+	Joint	372
▽	Plane Type 1	1
□	shear zone	8

Color	Density Concentrations
	0.00 - 2.00
	2.00 - 4.00
	4.00 - 6.00
	6.00 - 8.00
	8.00 - 10.00
	10.00 - 12.00
	12.00 - 14.00
	14.00 - 16.00
	16.00 - 18.00
	18.00 - 20.00

Contour Data	Dip Vectors
Maximum Density	19.17%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Planar Sliding
Slope Dip	80
Slope Dip Direction	140
Friction Angle	35°
Lateral Limits	20°

	Critical	Total	%
Planar Sliding (All)	44	417	10.55%
Planar Sliding (Set 4: joints)	34	40	85.00%

Plot Mode	Dip Vectors
Vector Count	417 (417 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Area limestone + quartzite units

Drawn By

Terracon

Author

JMc

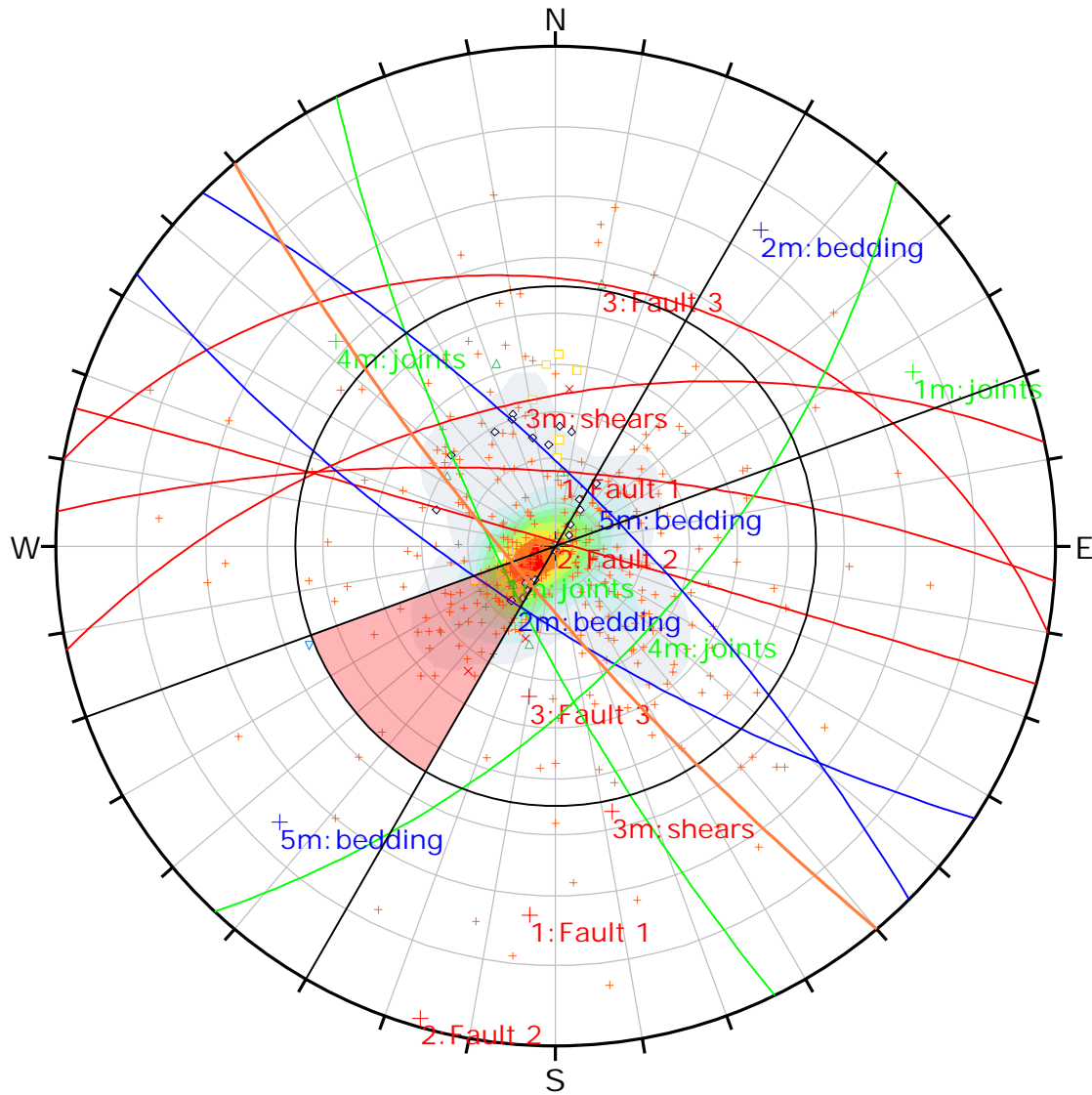
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planar Blk Mtn Area Data vector plot.dips7

Date

7/2/2020





Symbol	TYPE	Quantity
◇	Bedding	22
×	Cleavage	4
△	Fault	10
+	Joint	372
▽	Plane Type 1	1
□	shear zone	8

Color	Density Concentrations
	0.00 - 2.00
	2.00 - 4.00
	4.00 - 6.00
	6.00 - 8.00
	8.00 - 10.00
	10.00 - 12.00
	12.00 - 14.00
	14.00 - 16.00
	16.00 - 18.00
	18.00 - 20.00

Contour Data	Dip Vectors
Maximum Density	19.17%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Planar Sliding
Slope Dip	80
Slope Dip Direction	230
Friction Angle	35°
Lateral Limits	20°

	Critical	Total	%
Planar Sliding (All)	62	417	14.87%
Planar Sliding (Set 1: joints)	20	48	41.67%
Planar Sliding (Set 2: bedding)	30	61	49.18%

Plot Mode	Dip Vectors
Vector Count	417 (417 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Area limestone + quartzite units

Drawn By

Terracon

Author

JMc

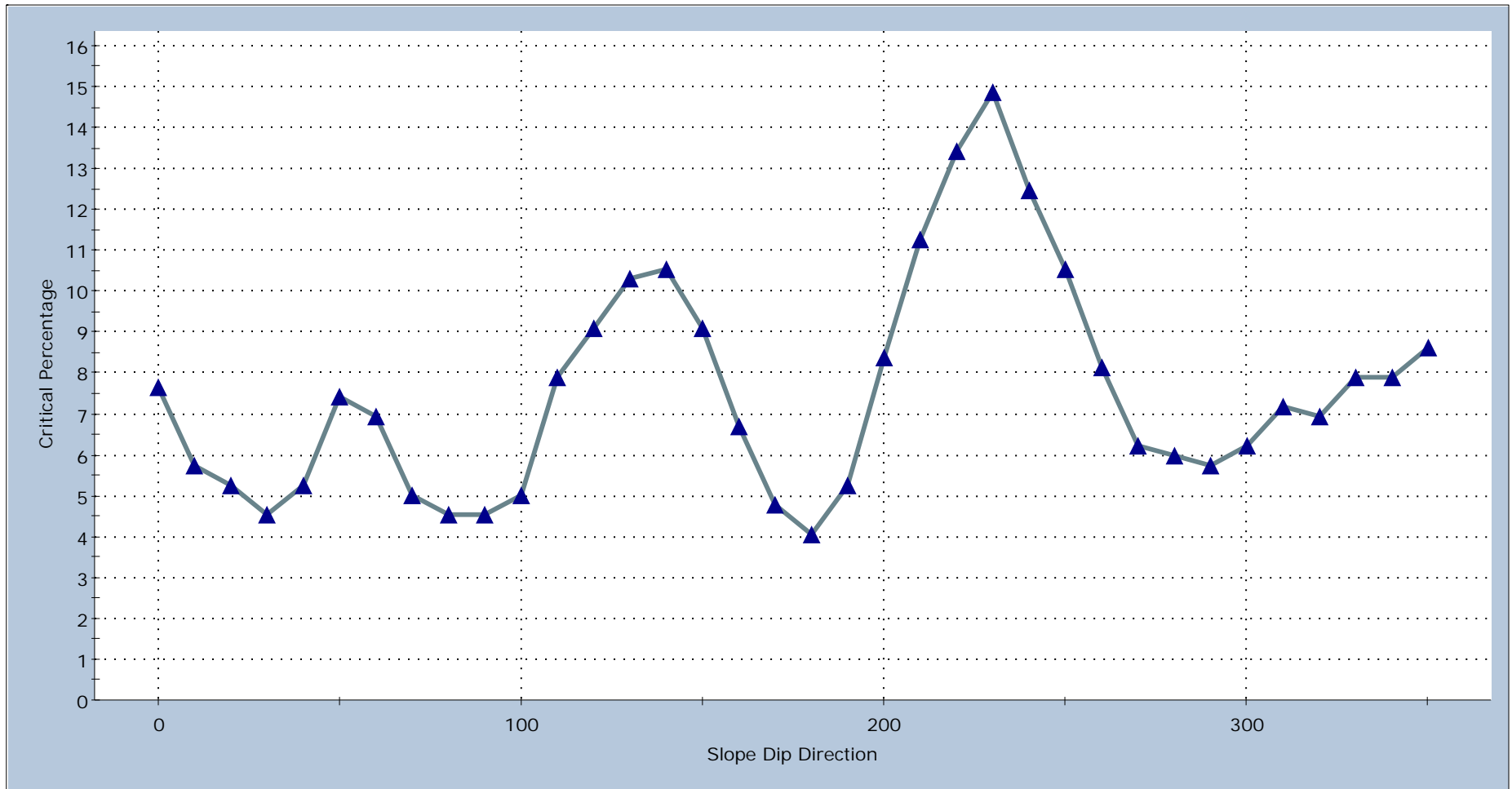
File Name

planar Blk Mtn Area Data vector plot.dips7

Date

7/2/2020

## Planar Sliding: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

# Terracon

Project

Cemex Wht/Blk Mtn

Analysis Description

Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)

Drawn By

Terracon

Author

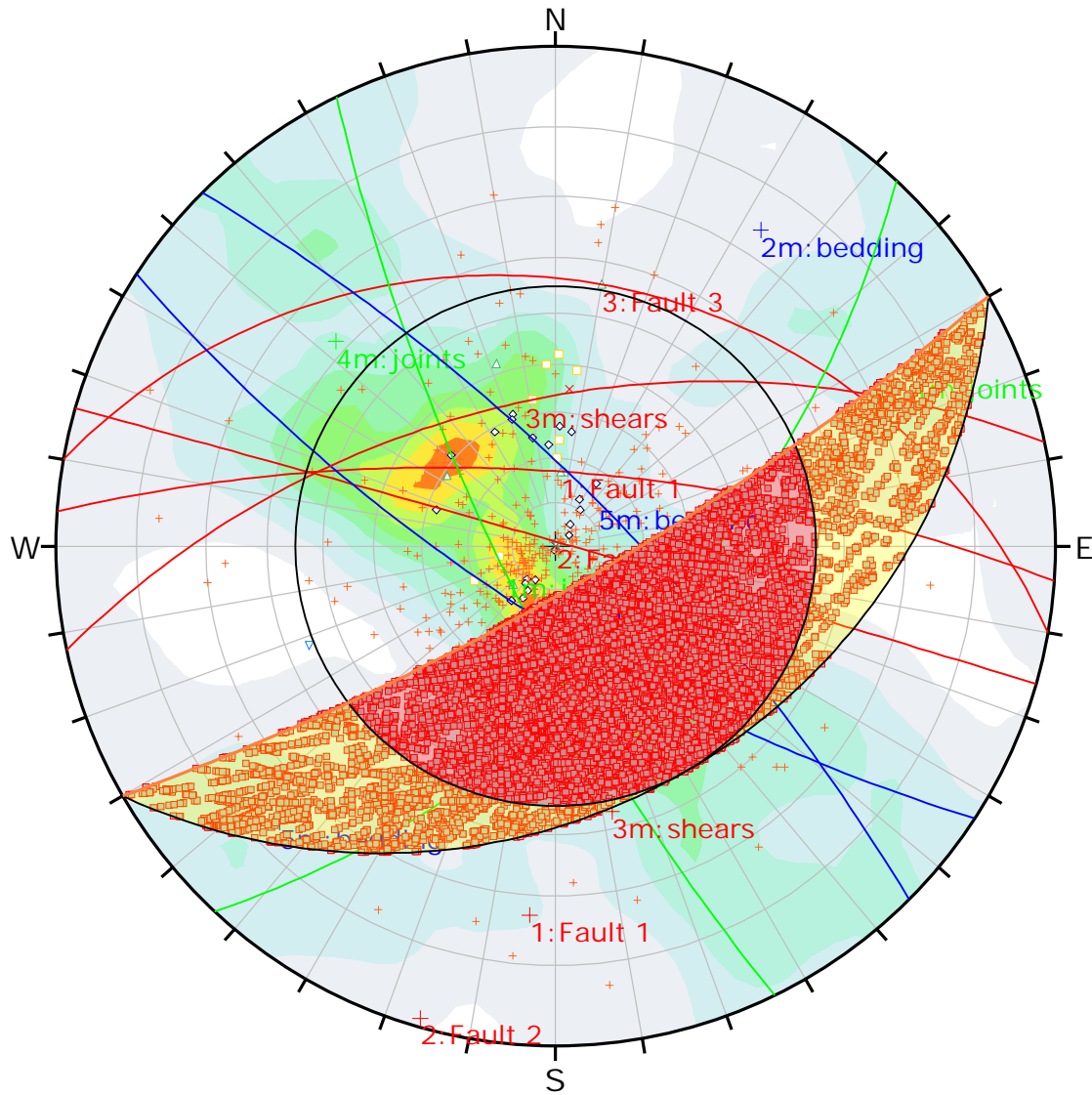
JMc

File Name

planar Blk Mtn Area Data vector.plot.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	22
×	Cleavage	4
△	Fault	10
+	Joint	372
▽	Plane Type 1	1
□	shear zone	8
Symbol	Feature	
■	Critical Intersection	

Color	Density Concentrations	
	0.00	- 0.35
	0.35	- 0.70
	0.70	- 1.05
	1.05	- 1.40
	1.40	- 1.75
	1.75	- 2.10
	2.10	- 2.45
	2.45	- 2.80
	2.80	- 3.15
	3.15	- 3.50

Contour Data	Intersections
Maximum Density	3.26%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding		
Slope Dip	80		
Slope Dip Direction	150		
Friction Angle	35°		

	Critical	Total	%
Wedge Sliding	25481	86734	29.38%

Plot Mode	Dip Vectors
Vector Count	417 (417 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	86734
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Area limestone + quartzite units

Drawn By

Terracon

Author

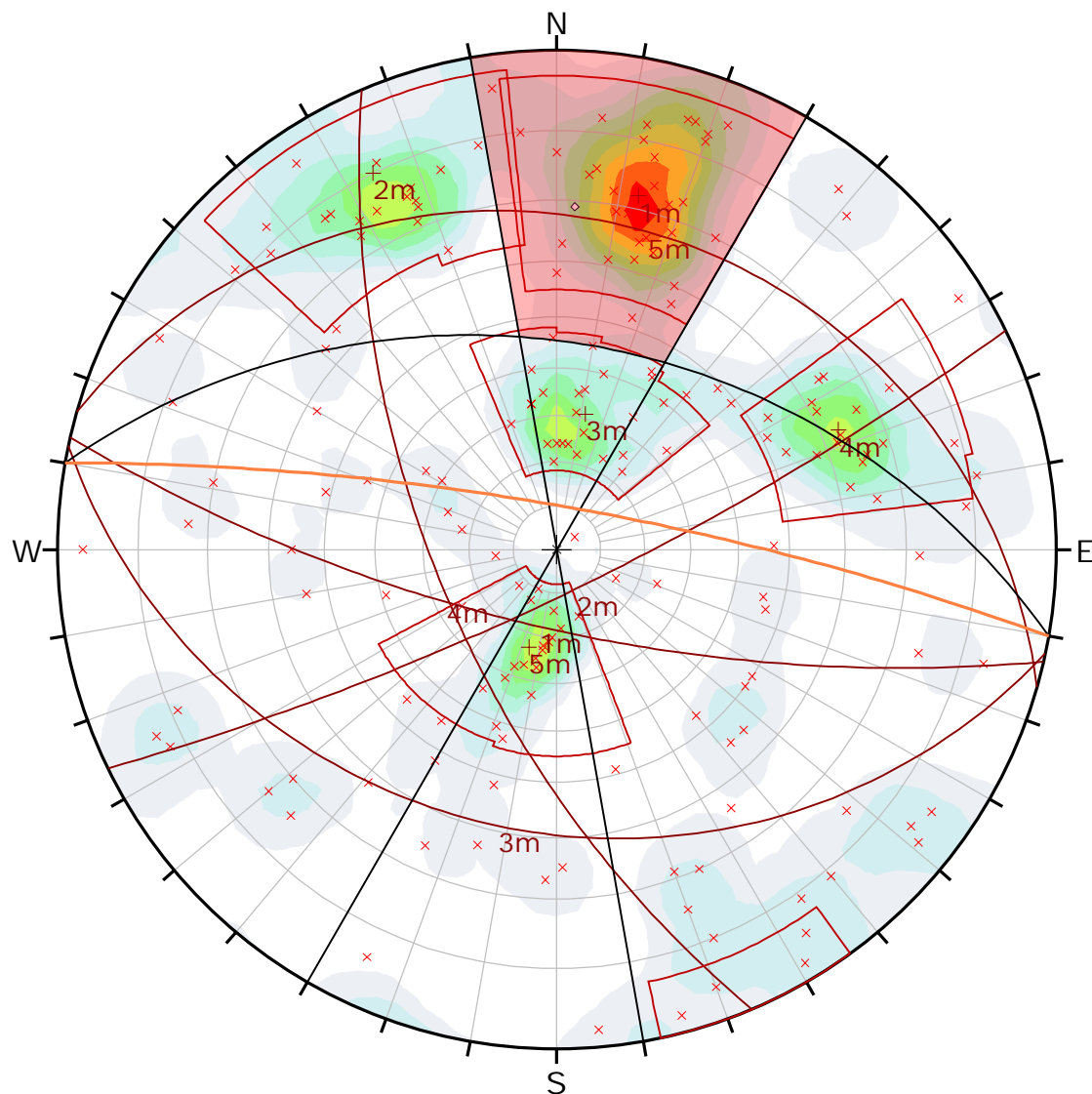
JMc

File Name

wedge Blk Mtn Area Data vector plot.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Cleavage	1
×	Joint	189

Color	Density Concentrations
	0.00 - 0.70
	0.70 - 1.40
	1.40 - 2.10
	2.10 - 2.80
	2.80 - 3.50
	3.50 - 4.20
	4.20 - 4.90
	4.90 - 5.60
	5.60 - 6.30
	6.30 - 7.00

Contour Data	Pole Vectors
Maximum Density	6.62%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Flexural Toppling
Slope Dip	80
Slope Dip Direction	10
Friction Angle	35°
Lateral Limits	20°

	Critical	Total	%
Flexural Toppling (All)	37	190	19.47%
Flexural Toppling (Set 1)	33	33	100.00%
Flexural Toppling (Set 2)	1	22	4.55%
Flexural Toppling (Set 3)	2	26	7.69%

Plot Mode	Pole Vectors
Vector Count	190 (190 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Sidewinder Area

Drawn By

Terracon

Author

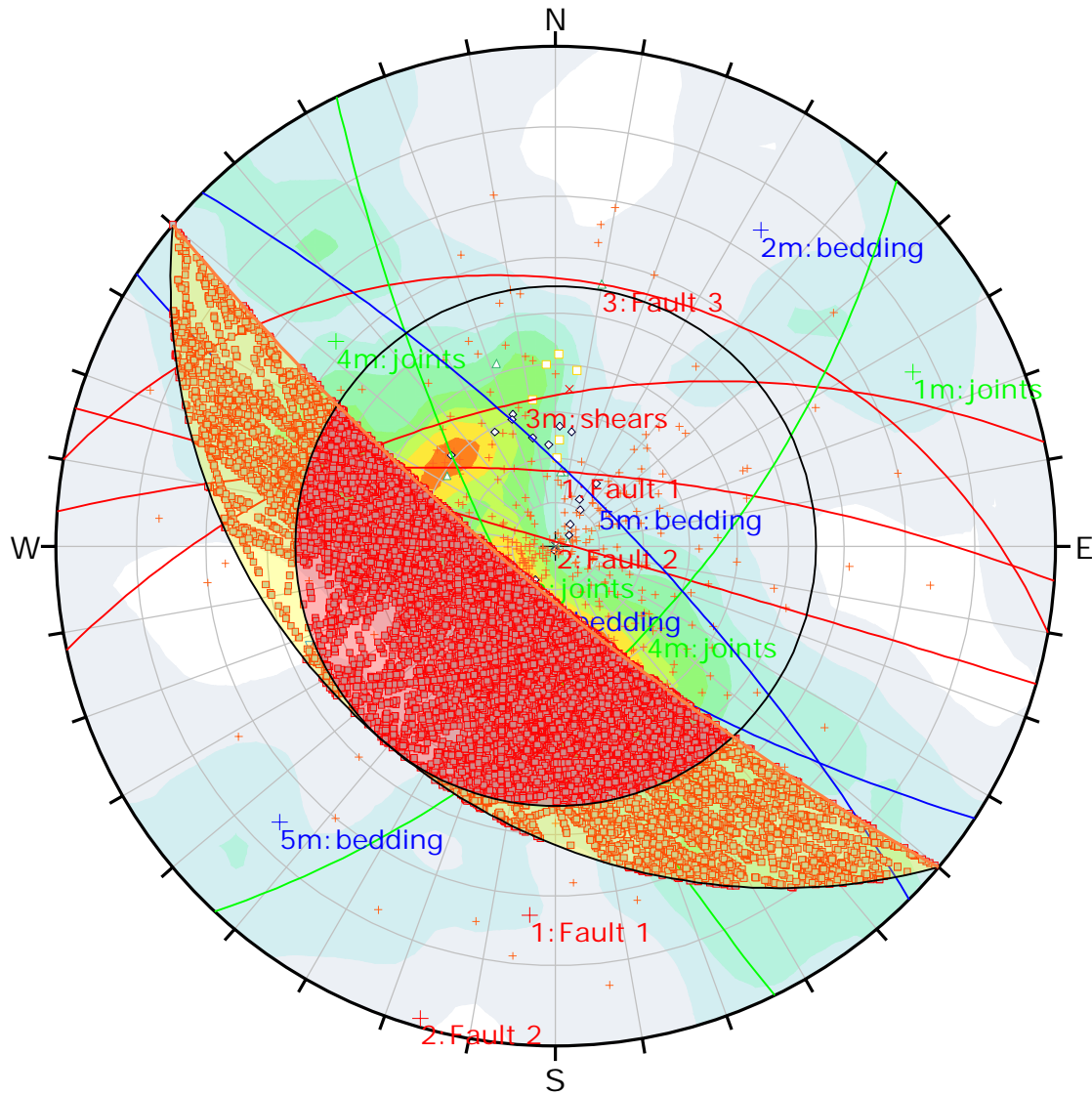
JMc

File Name

sens topple Area 6 01L2 and May29 sidewinder data.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	22
×	Cleavage	4
△	Fault	10
+	Joint	372
▽	Plane Type 1	1
□	shear zone	8
Symbol	Feature	
■	Critical Intersection	

Color	Density Concentrations	
	0.00	- 0.35
	0.35	- 0.70
	0.70	- 1.05
	1.05	- 1.40
	1.40	- 1.75
	1.75	- 2.10
	2.10	- 2.45
	2.45	- 2.80
	2.80	- 3.15
	3.15	- 3.50

Contour Data	Intersections
Maximum Density	3.26%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding
Slope Dip	80
Slope Dip Direction	220
Friction Angle	35°

	Critical	Total	%
Wedge Sliding	27718	86734	31.96%

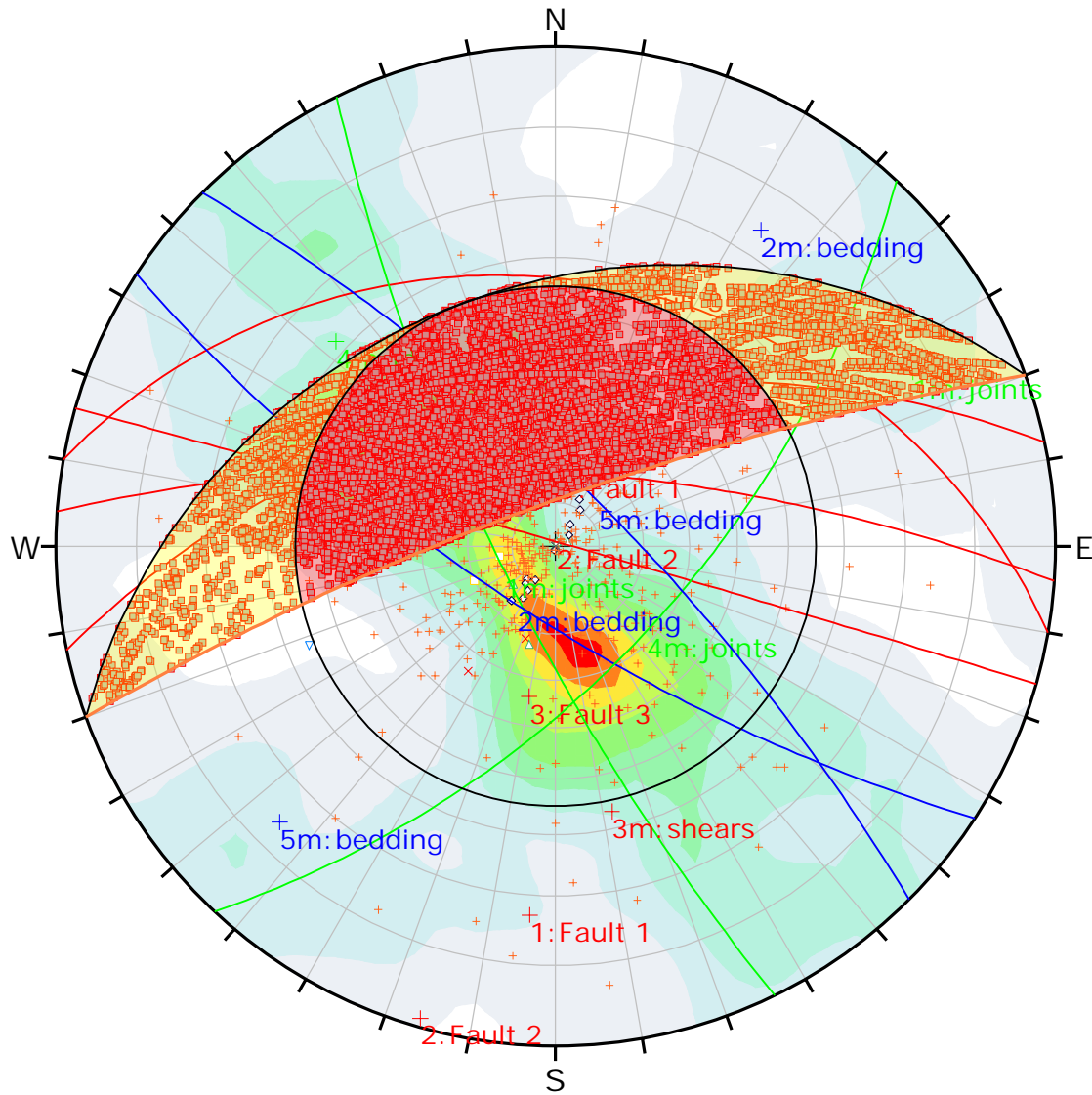
Plot Mode	Dip Vectors
Vector Count	417 (417 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	86734
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	Black Mtn Area limestone + quartzite units		
Drawn By	Terracon	Author	JMc
File Name	wedge Blk Mtn Area Data vector plot.dips7	Date	7/2/2020





Symbol	TYPE	Quantity
◇	Bedding	22
×	Cleavage	4
△	Fault	10
+	Joint	372
▽	Plane Type 1	1
□	shear zone	8
Symbol	Feature	
■	Critical Intersection	

Color	Density Concentrations	
	0.00	- 0.35
	0.35	- 0.70
	0.70	- 1.05
	1.05	- 1.40
	1.40	- 1.75
	1.75	- 2.10
	2.10	- 2.45
	2.45	- 2.80
	2.80	- 3.15
	3.15	- 3.50

Contour Data	Intersections
Maximum Density	3.26%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding
Slope Dip	80
Slope Dip Direction	340
Friction Angle	35°

	Critical	Total	%
Wedge Sliding	24240	86734	27.95%

Plot Mode	Dip Vectors
Vector Count	417 (417 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	86734
Hemisphere	Lower
Projection	Equal Angle

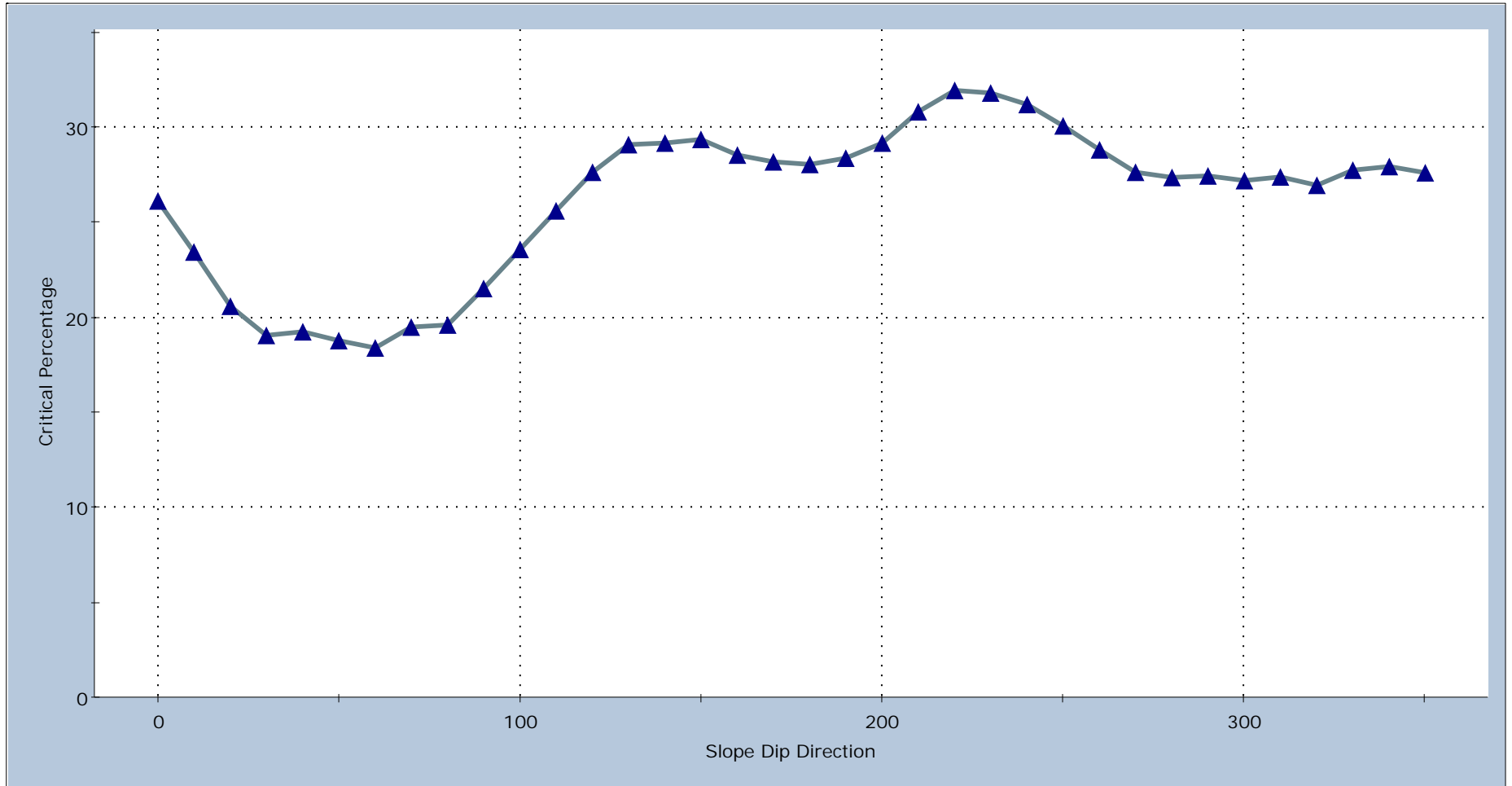
**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	Black Mtn Area limestone + quartzite units		
Drawn By	Terracon	Author	JMc
File Name	wedge Blk Mtn Area Data vector plot.dips7	Date	7/2/2020



## Wedge Sliding: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

# Terracon

*Project*

Cemex Wht/Blk Mtn

*Analysis Description*

Black Mtn Area limestone + quartzite units

*Drawn By*

Terracon

*Author*

JMc

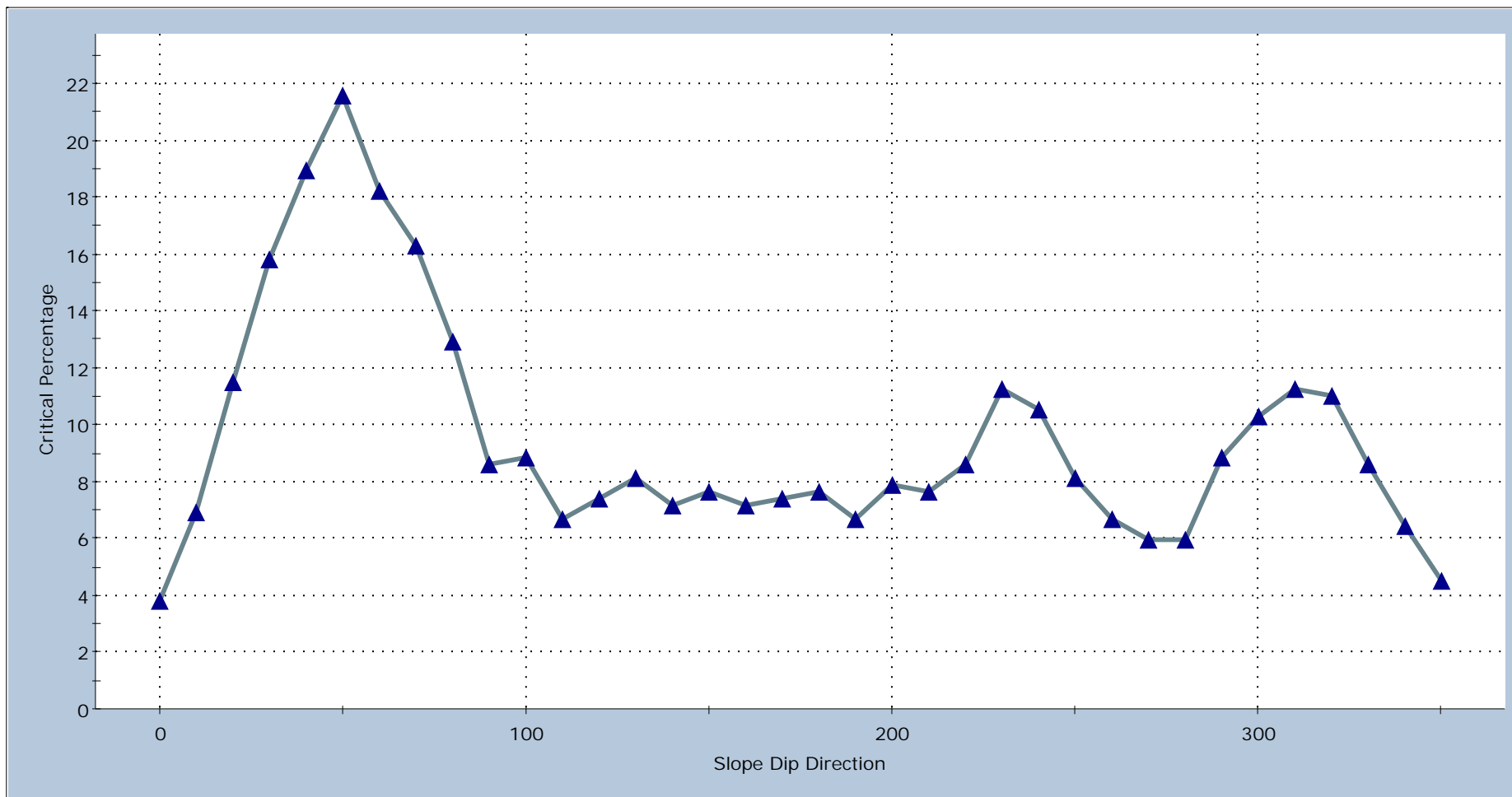
*File Name*

wedge Blk Mtn Area Data vector plot.dips7

*Date*

7/2/2020

## Flexural Toppling: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Project Area

Drawn By

Terracon

Author

JMc

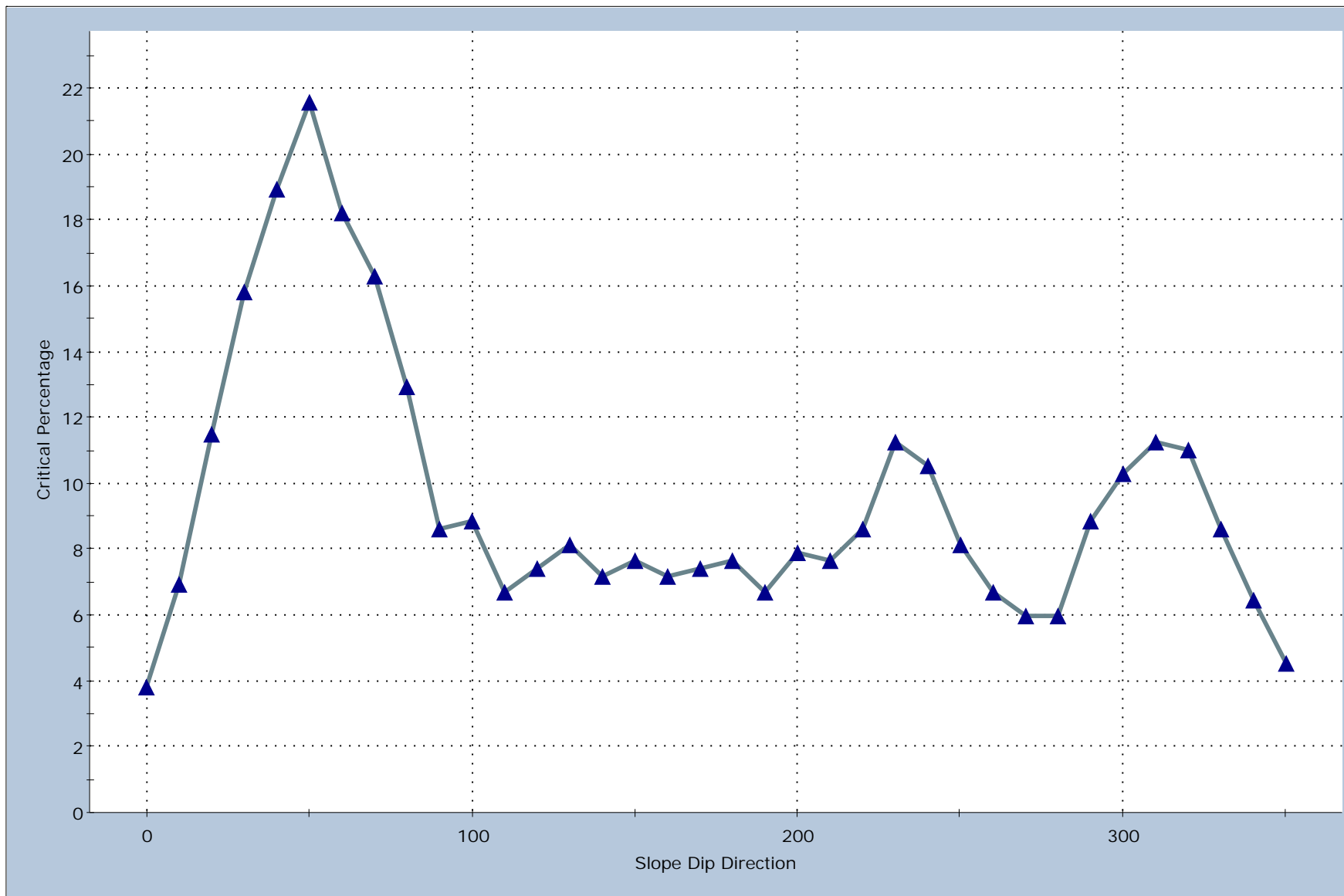
File Name

topple Blk Mtn Area Data.dips7

Date

7/10/2020

## Flexural Toppling: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

## Sidewinder Data

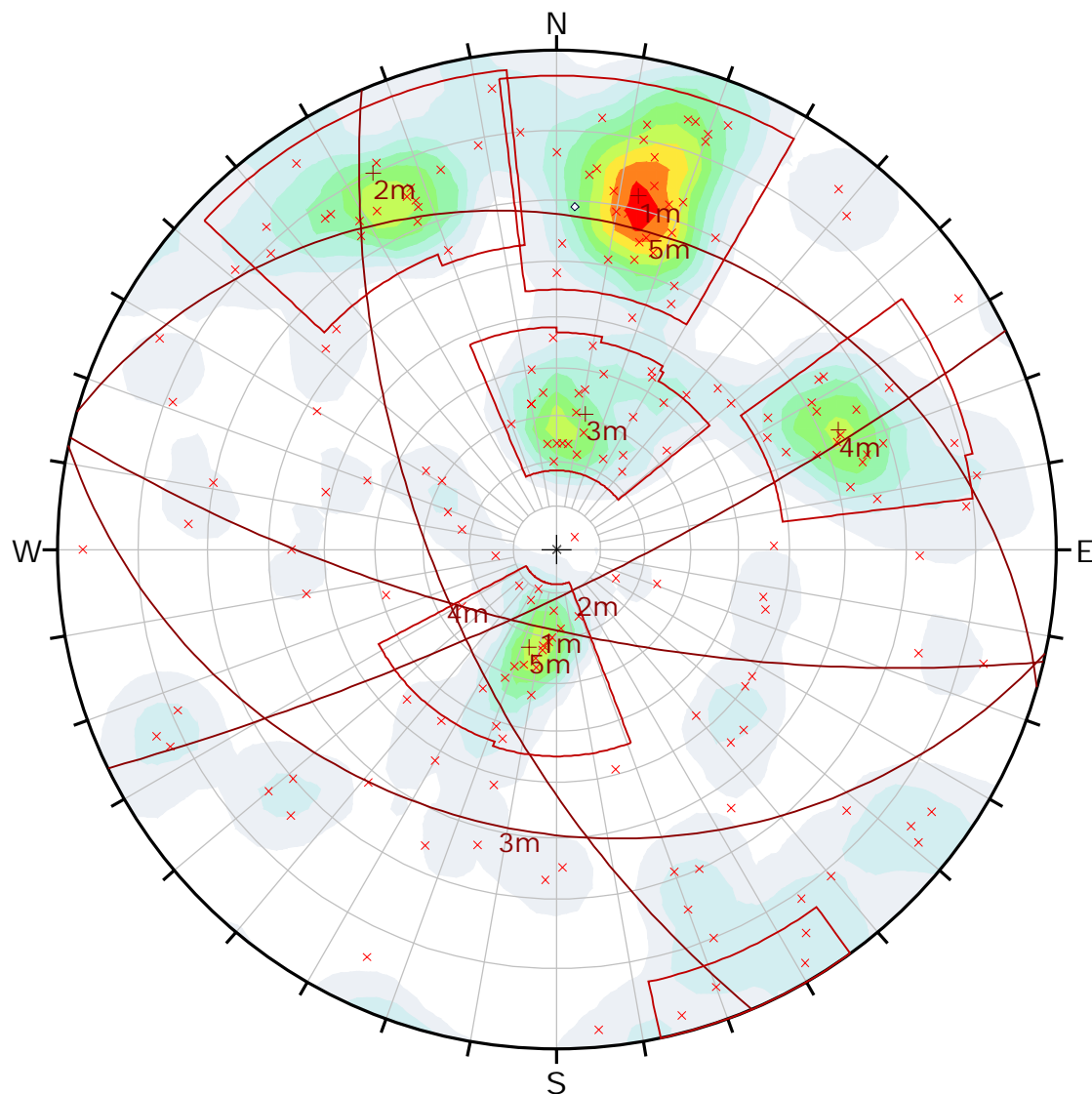
ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
1	79	264	Joint	sidewinder	Jqmp, Jsl7	1	1	5-29	4
2	73	094	Joint	sidewinder	Jqmp, Jsl7	1	1	5-29	
3	64	326	Joint	sidewinder	Jqmp, Jsl7	1	1	5-29	
4	54	080	Joint	sidewinder	Jqmp, Jsl7	1	1	5-29	
5	43	209	Joint	sidewinder	Jqmp, Jsl7	2	1	5-29	
6	74	050	Joint	sidewinder	Jqmp, Jsl7	1	1	5-29	7
7	34	121	Joint	sidewinder	Jqmp, Jsl7	2	1	5-29	
8	49	230	Joint	sidewinder	Jqmp, Jsl7	2	1	5-29	
9	83	285	Joint	sidewinder	Jqmp, Jsl7	2	1	5-29	
10	86	340	Joint	sidewinder	Jqmp, Jsl7		1	5-29	
11	72	271	Joint	sidewinder	Jqmp, Jsl7	2	1	5-29	4
12	24	175	Joint	sidewinder	Jqmp, Jsl7	2	2	5-29	5
13	31	188	Joint	sidewinder	Jqmp, Jsl7		2	5-29	5
14	58	180	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29	
15	81	260	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29	4
16	73	148	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29	1
17	45	034	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29	
18	46	283	Joint	sidewinder	Jqmp, Jsl7	1	3	5-29	
19	61	240	Joint	sidewinder	Jqmp, Jsl7	1	3	5-29	3
20	47	320	Joint	sidewinder	Jqmp, Jsl7	1	3	5-29	
21	53	238	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29	3
22	31	022	Joint	sidewinder	Jqmp, Jsl7	3	3	5-29	6
23	22	192	Joint	sidewinder	Jqmp, Jsl7		3	5-29	5
24	82	186	Joint	sidewinder	Jqmp, Jsl7	2	3	5-29	2
25	52	030	Joint	sidewinder	Jqmp, Jsl7	2	3	5-29	
26	43	016	Joint	sidewinder	Jqmp, Jsl7	2	4	5-29	
27	44	208	Joint	sidewinder	Jqmp, Jsl7	1	4	5-29	
28	78	145	Joint	sidewinder	Jqmp, Jsl7	1	4	5-29	1
29	52	015	Joint	sidewinder	Jqmp, Jsl7	3	4	5-29	
30	62	195	Joint	sidewinder	Jqmp, Jsl7	3	4	5-29	2
31	24	180	Joint	sidewinder	Jqmp, Jsl7	3	4	5-29	5
32	24	289	Joint	sidewinder	Jqmp, Jsl7		4	5-29	
33	63	015	Joint	sidewinder	Jqmp, Jsl7	4	4	5-29	8
34	47	269	Joint	sidewinder	Jqmp, Jsl7	4	4	5-29	
35	65	359	Joint	sidewinder	Jqmp, Jsl7	3	4	5-29	8
36	81	325	Joint	sidewinder	Jqmp, Jsl7	5	4	5-29	
37	49	225	Joint	sidewinder	Jqmp, Jsl7	5	4	5-29	
38	30	160	Joint	sidewinder	Jqmp, Jsl7	3	4	5-29	5
39	52	198	Joint	sidewinder	Jqmp, Jsl7	1	5	5-29	
40	85	305	Joint	sidewinder	Jqmp, Jsl7		5	5-29	
41	80	175	Joint	sidewinder	Jqmp, Jsl7		5	5-29	
42	79	255	Joint	sidewinder	Jqmp, Jsl7		5	5-29	4
43	65	160	Joint	sidewinder	Jqmp, Jsl7		5	5-29	
44	58	120	Joint	sidewinder	Jqmp, Jsl7	1	6	5-29	1
45	83	200	Joint	sidewinder	Jqmp, Jsl7	2	6	5-29	2
46	81	131	Joint	sidewinder	Jqmp, Jsl7	1	7	5-29	1
47	40	195	Joint	sidewinder	Jqmp, Jsl7	3	7	5-29	5
48	69	340	Joint	sidewinder	Jqmp, Jsl7	3	8	5-29	
49	44	110	Joint	sidewinder	Jqmp, Jsl7	2	8	5-29	

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
50	87	090	Joint	sidewinder	Jqmp, Jsl7	1	8	5-29	
51	75	340	Joint	sidewinder	Jqmp, Jsl7	2	8	5-29	
52	44	220	Joint	sidewinder	Jqmp, Jsl7	3	8	5-29	
53	83	221	Joint	sidewinder	Jqmp, Jsl7	2	9	5-29	3
54	5	235	Joint	sidewinder	Jqmp, Jsl7	1	9	5-29	
55	50	306	Joint	sidewinder	Jqmp, Jsl7	1	9	5-29	
56	33	228	Joint	sidewinder	Jqmp, Jsl7	3	9	5-29	
57	49	345	Joint	sidewinder	Jqmp, Jsl7	3	9	5-29	
58	56	090	Joint	sidewinder	Jqmp, Jsl7	2	9	5-29	
59	74	185	Joint	sidewinder	Jqmp, Jsl7	3	10	5-29	2
60	34	210	Joint	sidewinder	Jqmp, Jsl7	1	10	5-29	5
61	63	131	Joint	sidewinder	Jqmp, Jsl7		10	5-29	1
62	14	003	Joint	sidewinder	Jqmp, Jsl7	4	10	5-29	6
63	77	180	Joint	sidewinder	Jqmp, Jsl7	2	11	5-29	2
64	73	200	Joint	sidewinder	Jqmp, Jsl7		11	5-29	2
65	41	019	Joint	sidewinder	Jqmp, Jsl7		11	5-29	
66	76	312	Joint	sidewinder	Jqmp, Jsl7	4	11	5-29	
67	35	028	Joint	sidewinder	Jqmp, Jsl7		11	5-29	6
68	23	220	Joint	sidewinder	Jqmp, Jsl7	4	11	5-29	5
69	84	25	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 2	6-01	8
70	86	309	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 2	6-01	
71	51	104	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 2	6-01	
72	88	345	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	
73	61	242	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	3
74	76	158	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	
75	35	175	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	5
76	33	170	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	5
77	33	170	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	5
78	39	75	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
79	84	118	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
80	79	67	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	7
81	16	342	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	6
82	27	193	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	5
83	40	216	Joint	Sidewinder	Jqmp, Jsl7	5	Locality 2	6-01	
84	67	245	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	3
85	81	155	Joint	Sidewinder	Jqmp, Jsl7	5	Locality 2	6-01	
86	85	218	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	3
87	79	169	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	
88	23	207	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	5
89	88	355	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
90	82	63	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	7
91	73	158	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	
92	20	3	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	6
93	22	8	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	6
94	24	186	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	5
95	15	296	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
96	74	45	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	7
97	71	157	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	1
98	77	163	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	

ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
99	47	286	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
100	74	158	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	
101	75	157	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	1
102	83	65	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	7
103	24	183	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	5
104	66	196	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01	2
105	70	49	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	7
106	78	146	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	1
107	74	286	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
108	86	146	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01	1
109	82	138	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	1
110	88	329	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
111	40	172	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	5
112	70	101	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	
113	80	338	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01	
114	45	190	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	
115	63	181	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
116	50	303	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
117	67	2	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	8
118	62	258	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	4
119	79	111	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	
120	61	190	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	2
121	36	190	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	5
122	26	109	Joint	Sidewinder	Jqmp, Jsl7		Locality 2	6-01	
123	71	194	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	2
124	64	135	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	1
125	35	188	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	5
126	79	136	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	1
127	25	11	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	6
128	69	195	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
129	70	336	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
130	46	179	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
131	72	189	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01	2
132	46	45	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
133	64	198	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
134	65	195	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
135	69	192	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	2
136	30	121	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
137	68	200	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	2
138	69	190	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01	2
139	20	178	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	5
140	57	205	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
141	60	204	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
142	53	247	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
143	22	102	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	
144	58	250	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	4
145	87	238	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	3
146	66	261	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	4
147	55	318	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	



ID	Dip	Dip Direction	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
148	72	198	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	2
149	82	192	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	2
150	69	252	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	4
151	55	314	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	
152	80	192	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
153	51	242	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	
154	65	254	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	4
155	84	308	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
156	84	197	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
157	33	10	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	6
158	82	200	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	2
159	66	253	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	4
160	65	237	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	3
161	81	320	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
162	26	215	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	5
163	28	20	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	6
164	27	16	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	6
165	27	10	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	6
166	64	237	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	3
167	85	327	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	
168	23	8	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	6
169	73	244	Joint	Sidewinder	Jqmp, Jsl7	1	Locality 2	6-01	3
170	21	5	Joint	Sidewinder	Jqmp, Jsl7	4	Locality 2	6-01	6
171	62	39	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	7
172	84	198	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	2
173	18	357	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	6
174	66	24	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	8
175	86	172	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	
176	70	207	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	2
177	78	194	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
178	75	186	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
179	14	84	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	6
180	74	195	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
181	69	183	Cleavage	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	2
182	12	46	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	6
183	10	25	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	6
184	75	152	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	1
185	62	249	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	4
186	75	149	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	1
187	63	248	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	4
188	85	202	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	2
189	13	27	Joint	Sidewinder	Jqmp, Jsl7	3	Locality 2	6-01	6
190	25	59	Joint	Sidewinder	Jqmp, Jsl7	2	Locality 2	6-01	6



Symbol	TYPE	Quantity
◇	Cleavage	1
×	Joint	189

Color	Density Concentrations
	0.00 - 0.70
	0.70 - 1.40
	1.40 - 2.10
	2.10 - 2.80
	2.80 - 3.50
	3.50 - 4.20
	4.20 - 4.90
	4.90 - 5.60
	5.60 - 6.30
	6.30 - 7.00

Contour Data	Pole Vectors
Maximum Density	6.62%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	190 (190 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Sidewinder Area

Drawn By

Terracon

Author

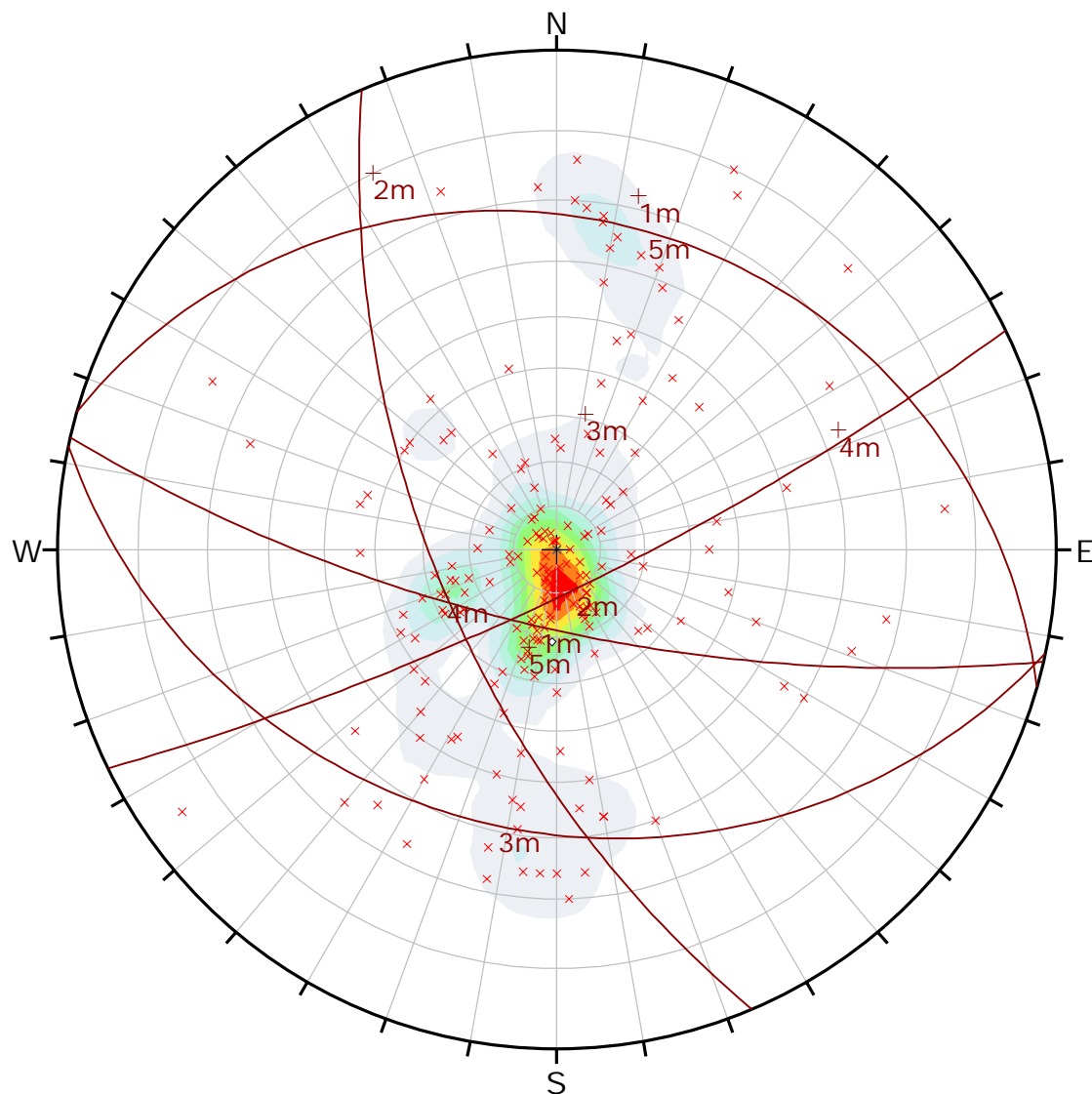
JMc

File Name

clusters Area 6 01L2 and May29 sidewinder data.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Cleavage	1
×	Joint	189

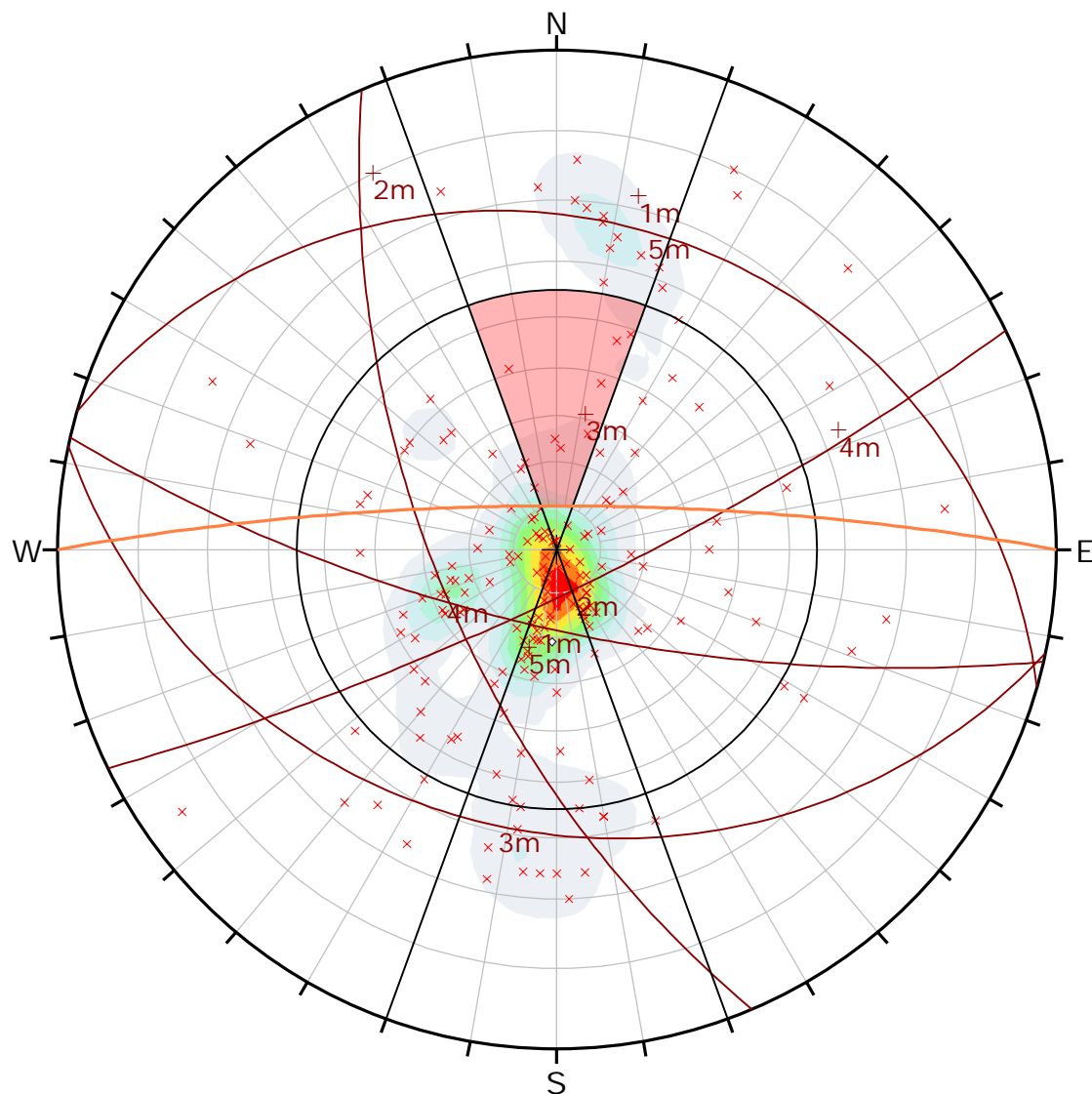
Color	Density Concentrations
	0.00 - 1.50
	1.50 - 3.00
	3.00 - 4.50
	4.50 - 6.00
	6.00 - 7.50
	7.50 - 9.00
	9.00 - 10.50
	10.50 - 12.00
	12.00 - 13.50
	13.50 - 15.00

Contour Data	Dip Vectors
Maximum Density	14.51%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Dip Vectors
Vector Count	190 (190 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project	Cemex Wht/Blk Mtn		
Analysis Description	Sidewinder Area		
Drawn By	Terracon	Author	JMc
File Name	Clusters Area 6 OTL2 and May29 sidewinder data vector plot.dips7	Date	7/2/2020



Symbol	TYPE	Quantity
◇	Cleavage	1
x	Joint	189

Color	Density Concentrations
	0.00 - 1.50
	1.50 - 3.00
	3.00 - 4.50
	4.50 - 6.00
	6.00 - 7.50
	7.50 - 9.00
	9.00 - 10.50
	10.50 - 12.00
	12.00 - 13.50
	13.50 - 15.00

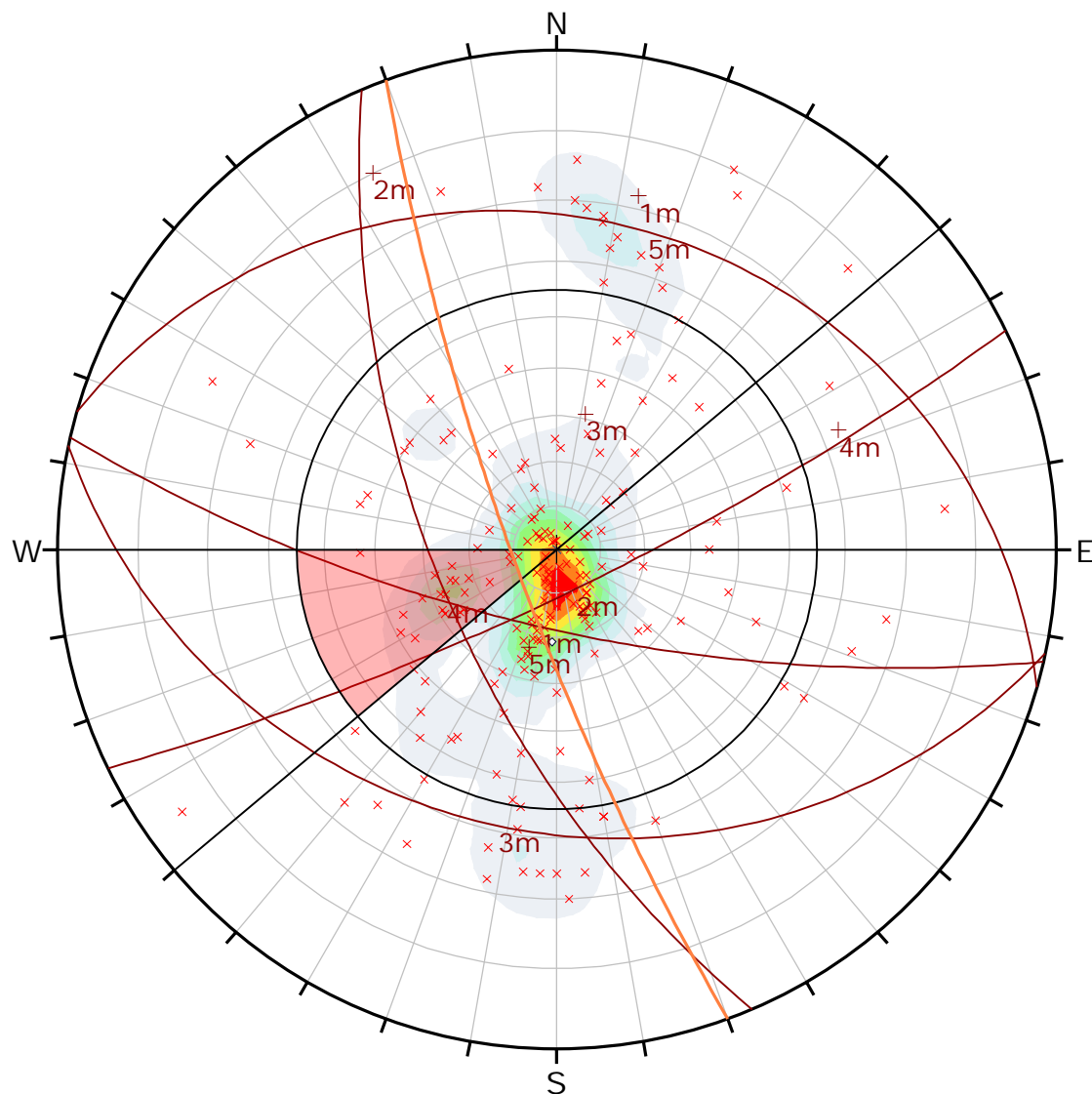
Contour Data	Dip Vectors
Maximum Density	14.51%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis		Planar Sliding		
Slope Dip		80		
Slope Dip Direction		0		
Friction Angle		35°		
Lateral Limits		20°		
		Critical	Total	%
Planar Sliding (All)		9	190	4.74%
Planar Sliding (Set 5)		2	20	10.00%

Plot Mode	Dip Vectors
Vector Count	190 (190 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project	Cemex Wht/Blk Mtn		
Analysis Description	Sidewinder Area		
Drawn By	Terracon	Author	JMc
File Name	planar Area 6 UTL2 and May29 sidewinder data vector plot.dips7	Date	7/2/2020



Symbol	TYPE	Quantity
◇	Cleavage	1
x	Joint	189

Color	Density Concentrations
	0.00 - 1.50
	1.50 - 3.00
	3.00 - 4.50
	4.50 - 6.00
	6.00 - 7.50
	7.50 - 9.00
	9.00 - 10.50
	10.50 - 12.00
	12.00 - 13.50
	13.50 - 15.00

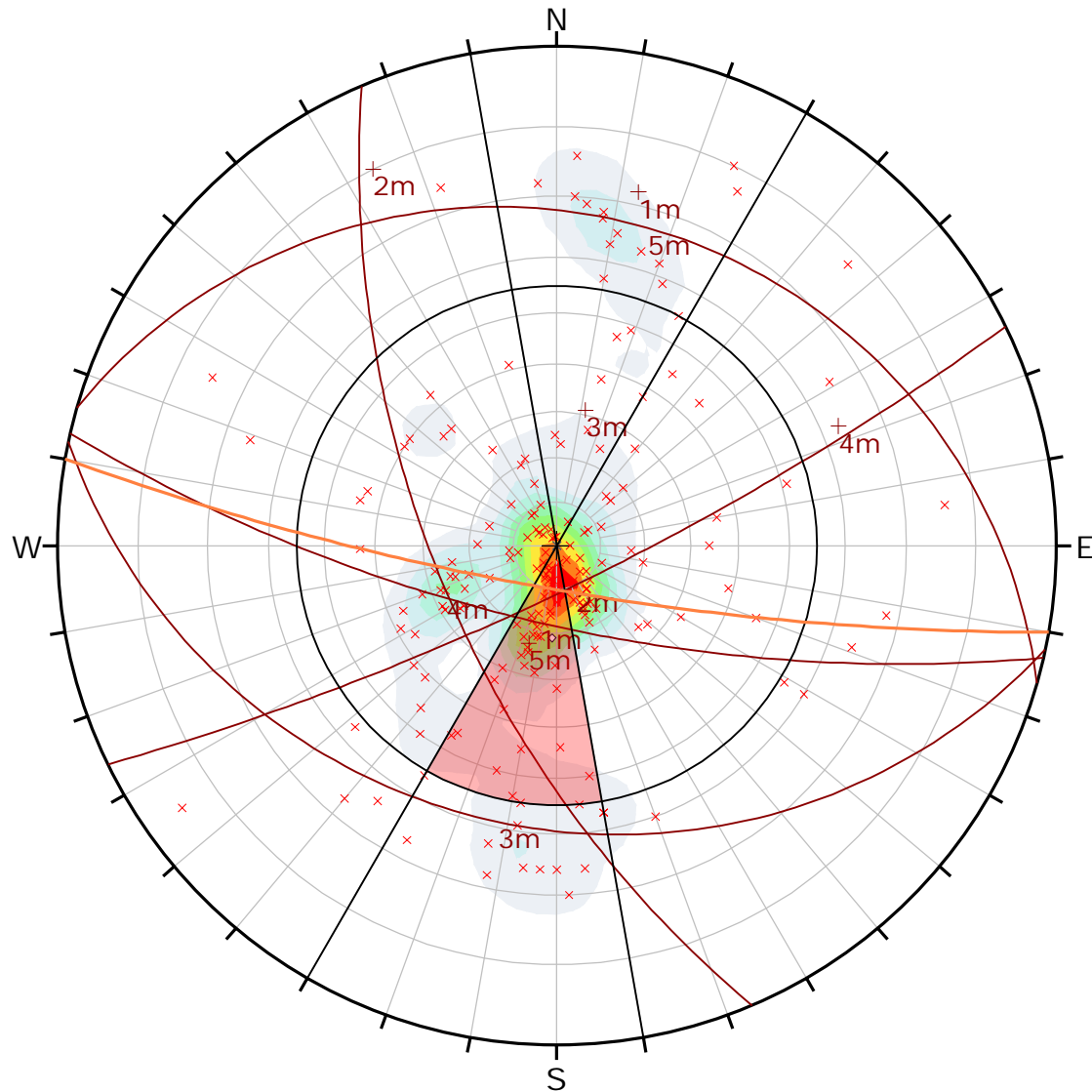
Contour Data	Dip Vectors
Maximum Density	14.51%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Planar Sliding			
Slope Dip	80			
Slope Dip Direction	250			
Friction Angle	35°			
Lateral Limits	20°			
		Critical	Total	%
Planar Sliding (All)		21	190	11.05%
Planar Sliding (Set 4)		18	18	100.00%

Plot Mode	Dip Vectors
Vector Count	190 (190 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project	Cemex Wht/Blk Mtn		
Analysis Description	Sidewinder Area		
Drawn By	Terracon	Author	JMc
File Name	planar 250 Area 6 UTL2 and May29 sidewinder data vector plot.dips7	Date	7/2/2020



Symbol	TYPE	Quantity
◇	Cleavage	1
x	Joint	189

Color	Density Concentrations
	0.00 - 1.50
	1.50 - 3.00
	3.00 - 4.50
	4.50 - 6.00
	6.00 - 7.50
	7.50 - 9.00
	9.00 - 10.50
	10.50 - 12.00
	12.00 - 13.50
	13.50 - 15.00

Contour Data	Dip Vectors
Maximum Density	14.51%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Planar Sliding
Slope Dip	80
Slope Dip Direction	190
Friction Angle	35°
Lateral Limits	20°

	Critical	Total	%
Planar Sliding (All)	34	190	17.89%
Planar Sliding (Set 1)	24	33	72.73%
Planar Sliding (Set 3)	9	26	34.62%

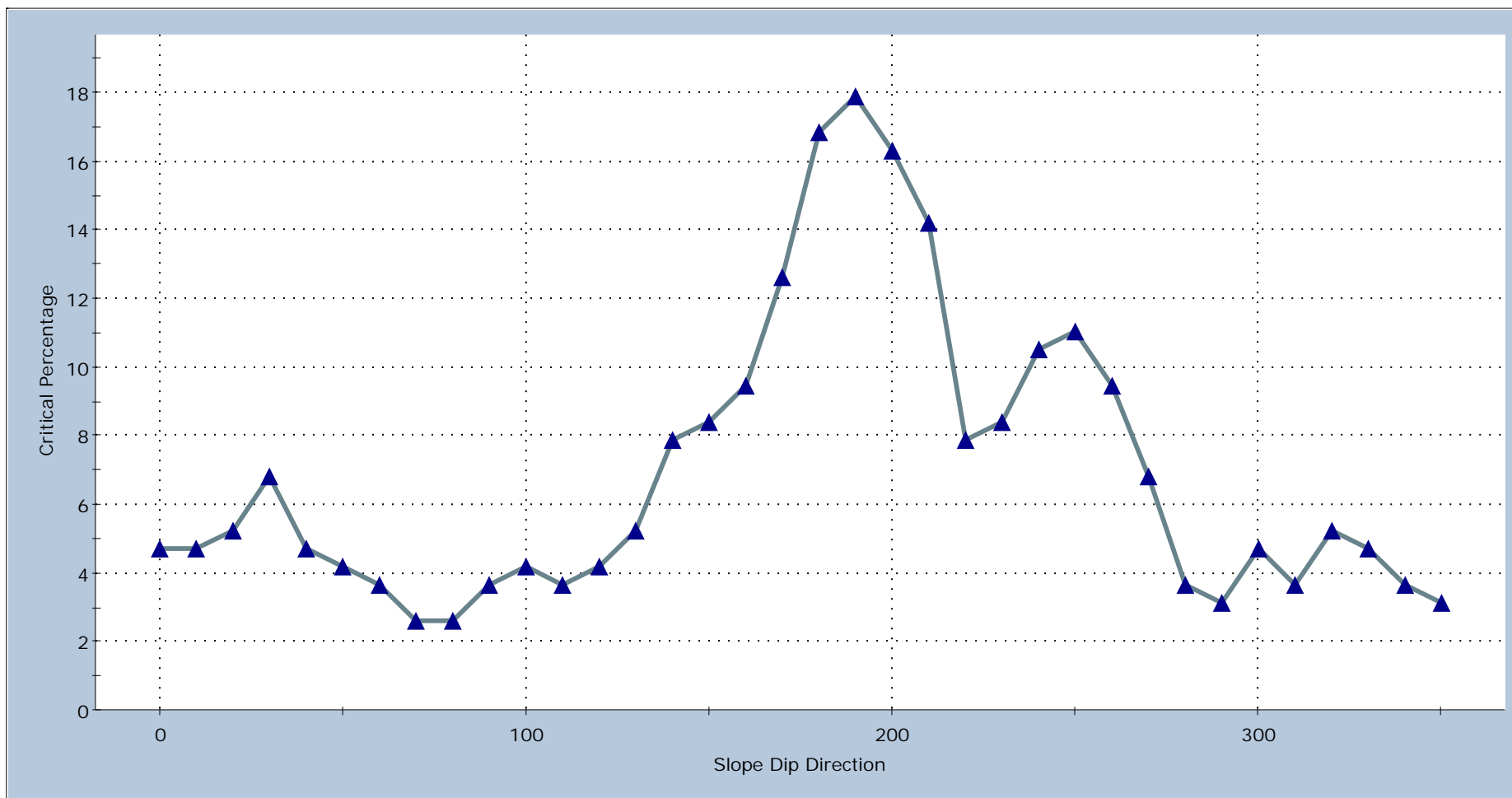
Plot Mode	Dip Vectors
Vector Count	190 (190 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	Sidewinder Area		
Drawn By	Terracon	Author	JMc
File Name	planar 250 Area 6 UT12 and May29 sidewinder data vector plot.dips7	Date	7/2/2020

## Planar Sliding: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 190

Friction Angle = 35

Lateral Limit = 20

# Terracon

Project

Cemex Wht/Blk Mtn

Analysis Description

Sidewinder Area

Drawn By

Terracon

Author

JMc

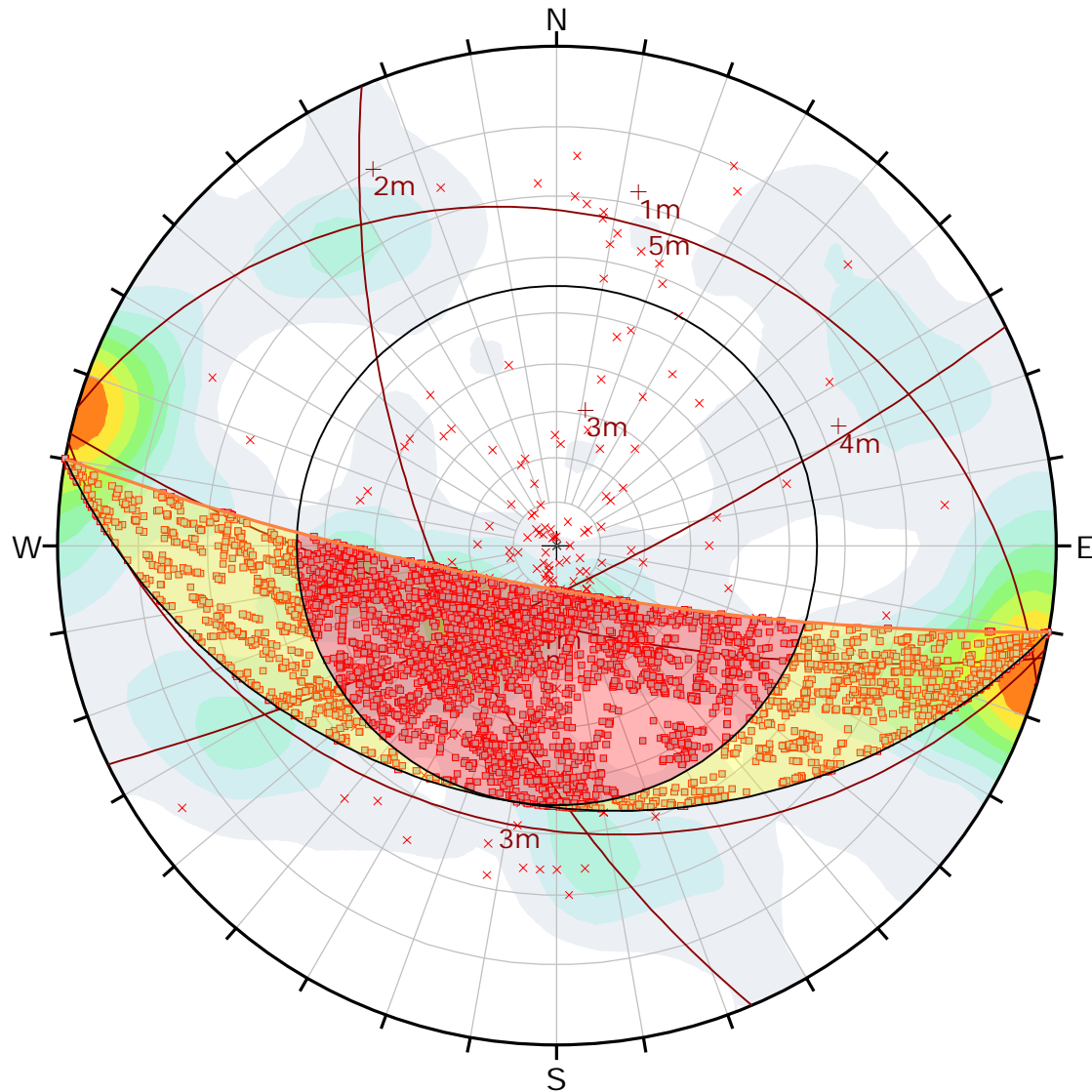
File Name

planar Area 6 UTL2 and May29 sidewinder data vector  
plot.dips7

Date

7/2/2020





Symbol	TYPE	Quantity
◇	Cleavage	1
×	Joint	189
Symbol	Feature	
■	Critical Intersection	

Color	Density Concentrations
	0.00 - 0.60
	0.60 - 1.20
	1.20 - 1.80
	1.80 - 2.40
	2.40 - 3.00
	3.00 - 3.60
	3.60 - 4.20
	4.20 - 4.80
	4.80 - 5.40
	5.40 - 6.00

Contour Data	Intersections
Maximum Density	5.41%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding
Slope Dip	80
Slope Dip Direction	190
Friction Angle	35°

	Critical	Total	%
Wedge Sliding	6073	17954	33.83%

Plot Mode	Dip Vectors
Vector Count	190 (190 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	17954
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Sidewinder Area

Drawn By

Terracon

Author

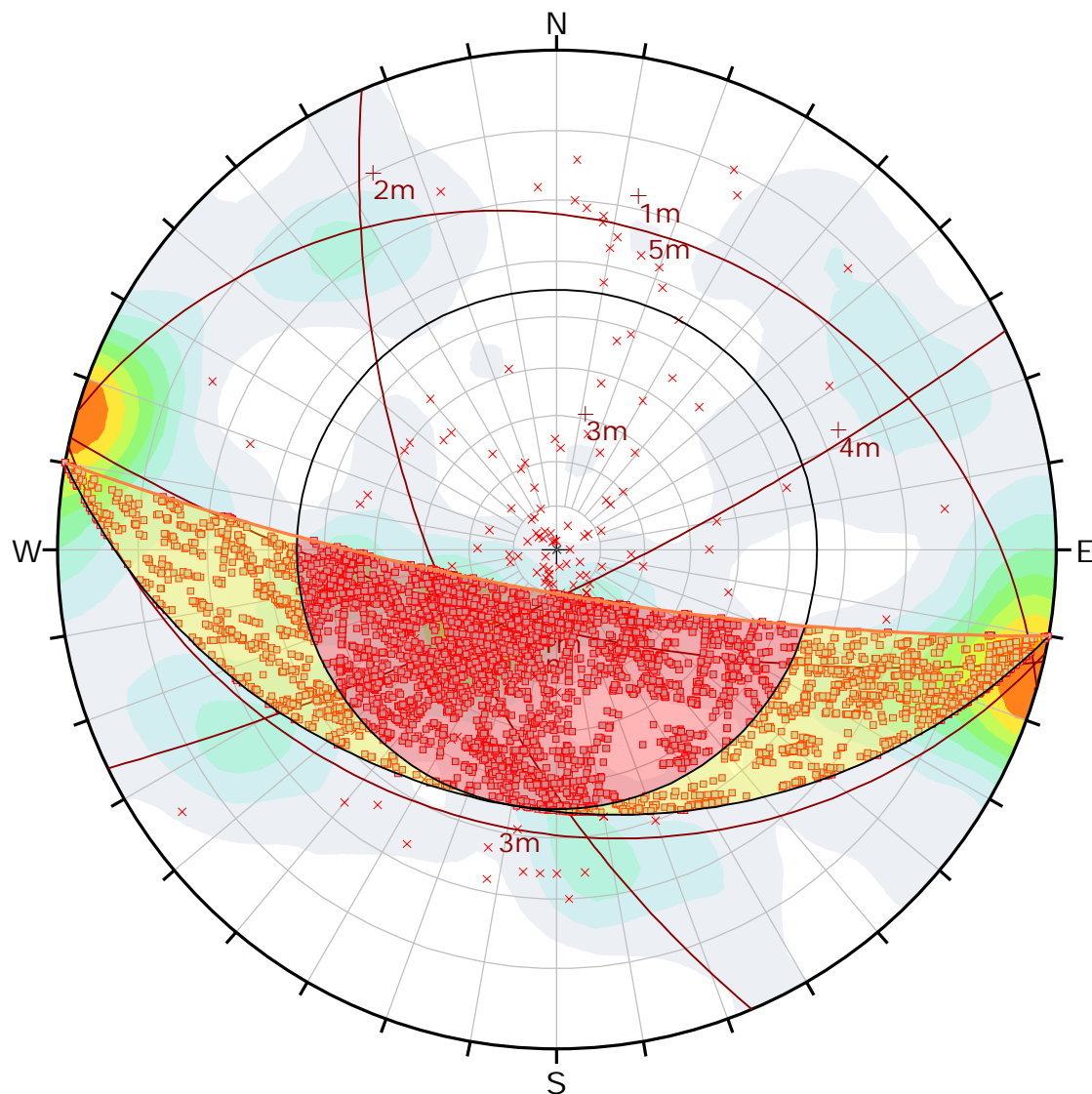
JMc

File Name

190 wedge Area 6 01L2 and May29 sidewinder data vector plot.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Cleavage	1
×	Joint	189
Symbol	Feature	
■	Critical Intersection	

Color	Density Concentrations
	0.00 - 0.60
	0.60 - 1.20
	1.20 - 1.80
	1.80 - 2.40
	2.40 - 3.00
	3.00 - 3.60
	3.60 - 4.20
	4.20 - 4.80
	4.80 - 5.40
	5.40 - 6.00

Contour Data	Intersections
Maximum Density	5.41%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding
Slope Dip	80
Slope Dip Direction	190
Friction Angle	35°

	Critical	Total	%
Wedge Sliding	6073	17954	33.83%

Plot Mode	Dip Vectors
Vector Count	190 (190 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	17954
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Sidewinder Area

Drawn By

Terracon

Author

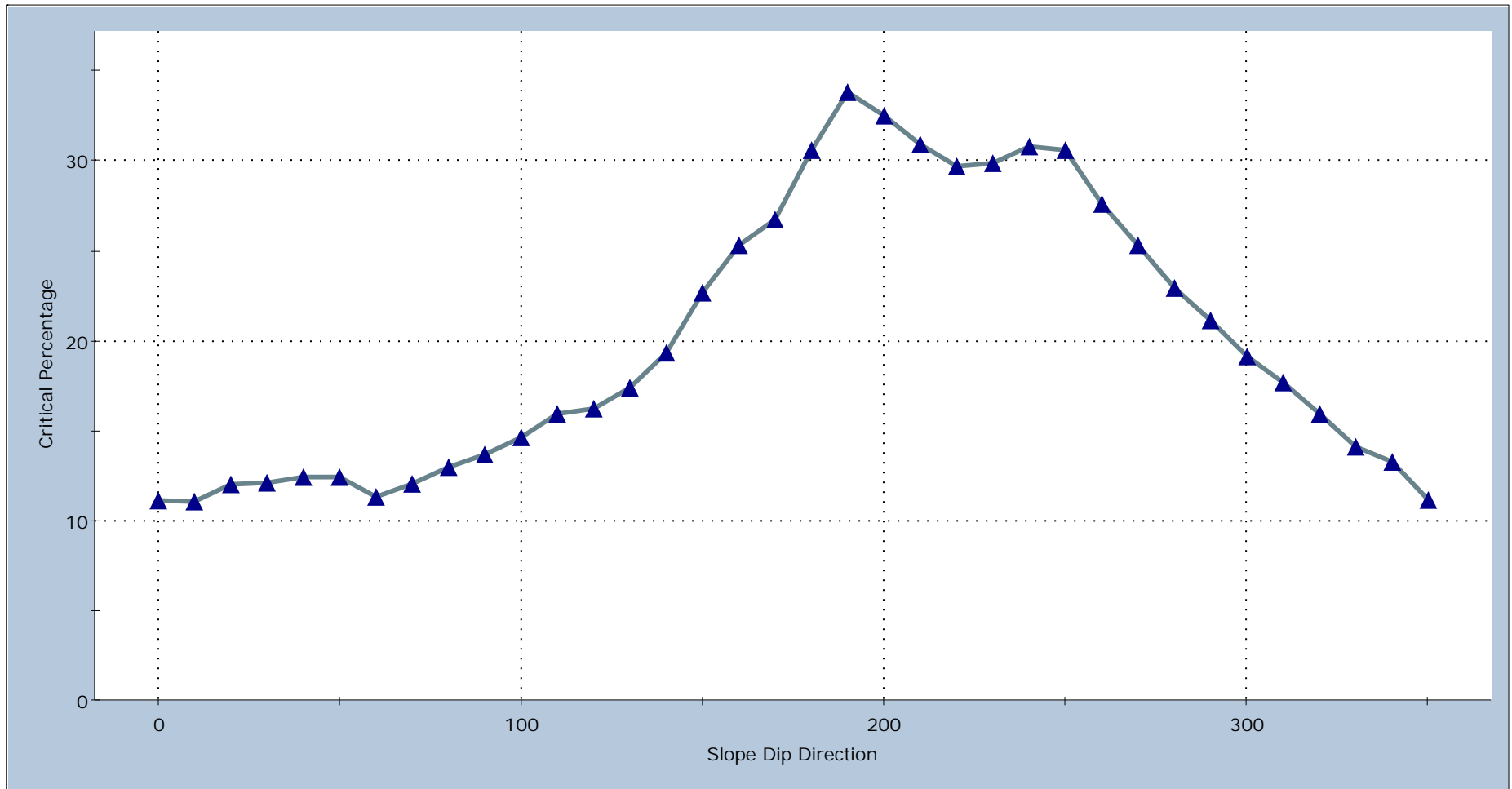
JMc

File Name: 250 wedge Area 6 01L2 and May29 sidewinder data vector plot.dips7

Date

7/2/2020

## Wedge Sliding: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

# Terracon

*Project*

Cemex Wht/Blk Mtn

*Analysis Description*

Sidewinder Area

*Drawn By*

Terracon

*Author*

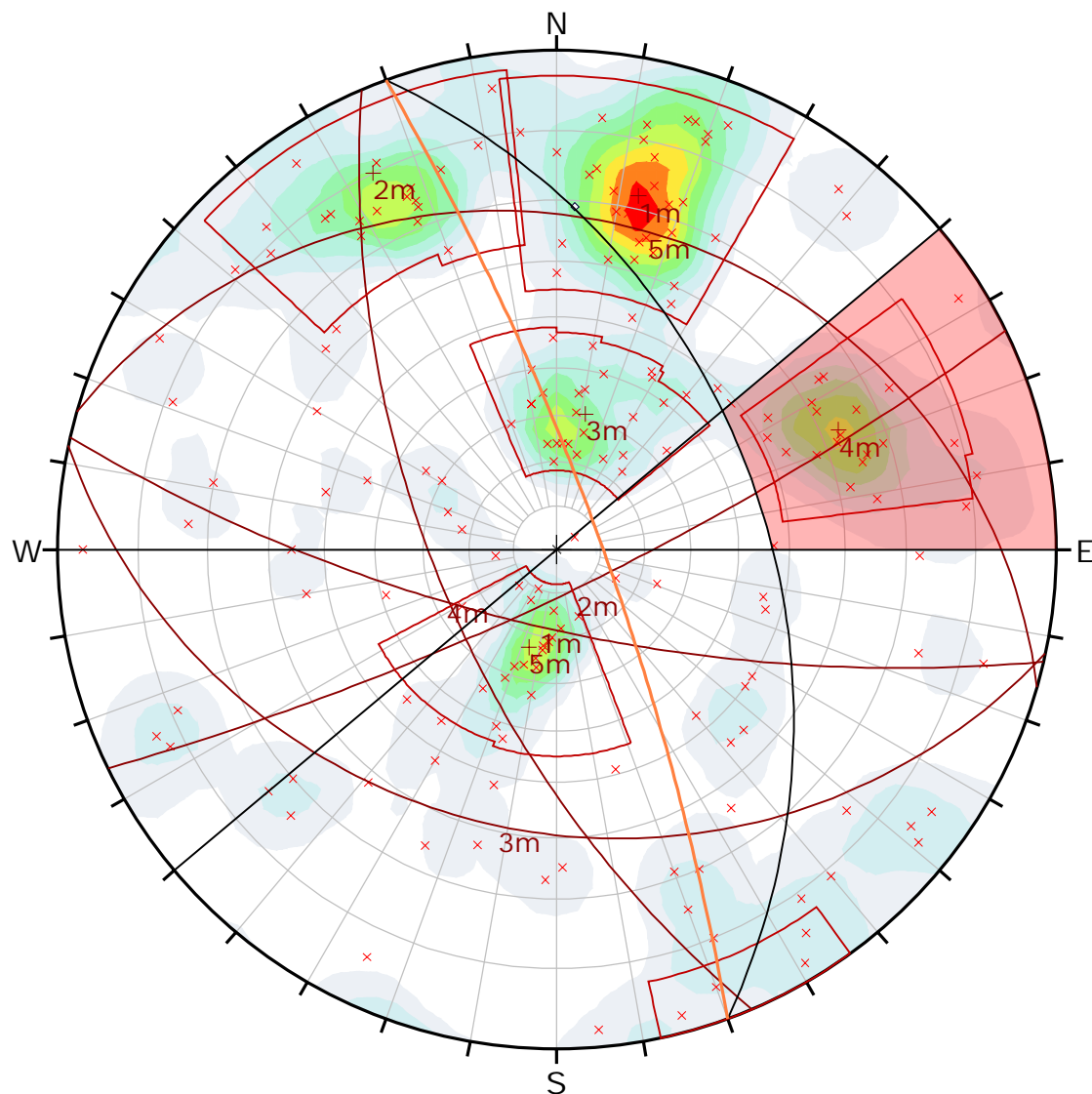
JMc

*File Name*

Sens wedge Area 6 UTL2 and May29 sidewinder data vector  
plot.dips7

*Date*

7/2/2020



Symbol	TYPE	Quantity
◇	Cleavage	1
x	Joint	189

Color	Density Concentrations
	0.00 - 0.70
	0.70 - 1.40
	1.40 - 2.10
	2.10 - 2.80
	2.80 - 3.50
	3.50 - 4.20
	4.20 - 4.90
	4.90 - 5.60
	5.60 - 6.30
	6.30 - 7.00

Contour Data	Pole Vectors
Maximum Density	6.62%
Contour Distribution	Fisher
Counting Circle Size	1.0%

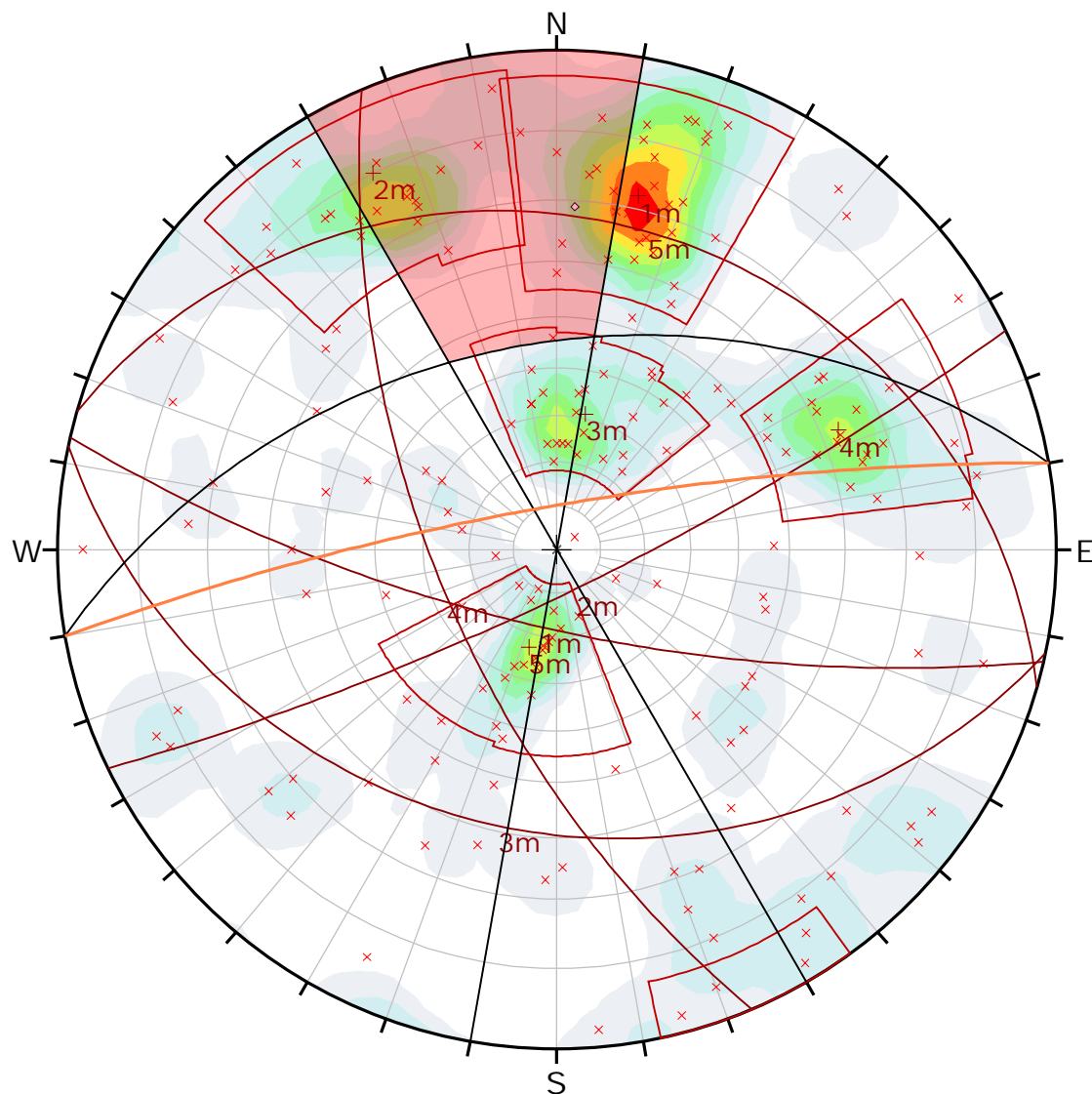
Kinematic Analysis		Flexural Toppling		
Slope Dip		80		
Slope Dip Direction		70		
Friction Angle		35°		
Lateral Limits		20°		
		Critical	Total	%
Flexural Toppling (All)		23	190	12.11%
Flexural Toppling (Set 4)		18	18	100.00%

Plot Mode	Pole Vectors
Vector Count	190 (190 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	Sidewinder Area		
Drawn By	Terracon	Author	JMc
File Name	sens topple Area 6 01L2 and May29 sidewinder data.dips7	Date	7/2/2020



Symbol	TYPE	Quantity
◇	Cleavage	1
×	Joint	189

Color	Density Concentrations
	0.00 - 0.70
	0.70 - 1.40
	1.40 - 2.10
	2.10 - 2.80
	2.80 - 3.50
	3.50 - 4.20
	4.20 - 4.90
	4.90 - 5.60
	5.60 - 6.30
	6.30 - 7.00

Contour Data	Pole Vectors
Maximum Density	6.62%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Flexural Toppling
Slope Dip	80
Slope Dip Direction	350
Friction Angle	35°
Lateral Limits	20°

	Critical	Total	%
Flexural Toppling (All)	23	190	12.11%
Flexural Toppling (Set 1)	11	33	33.33%
Flexural Toppling (Set 2)	11	22	50.00%
Flexural Toppling (Set 3)	1	26	3.85%

Plot Mode	Pole Vectors
Vector Count	190 (190 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Sidewinder Area

Drawn By

Terracon

Author

JMc

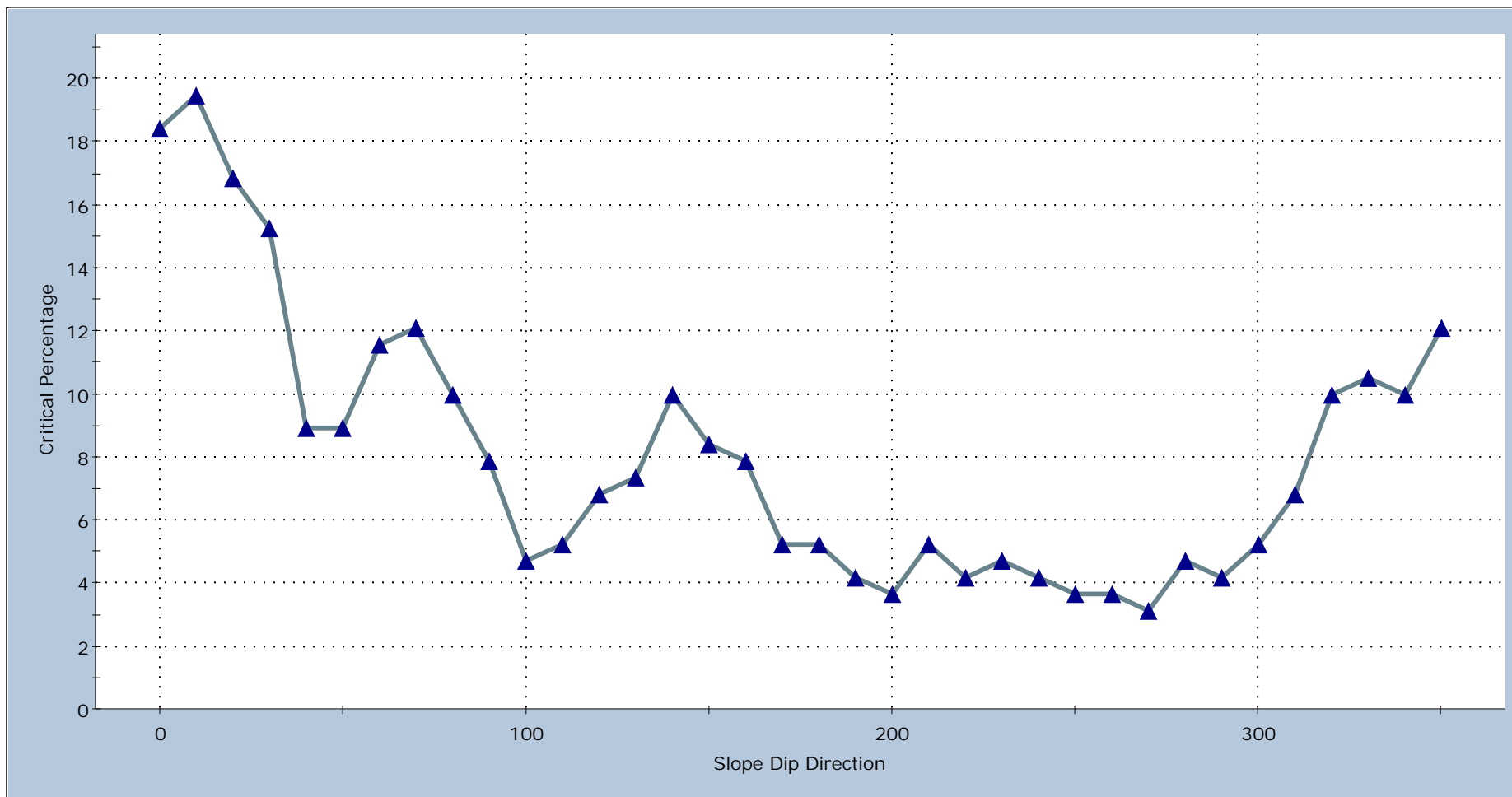
File Name

sens topple Area 6 01L2 and May29 sidewinder data.dips7

Date

7/2/2020

## Flexural Toppling: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Sidewinder Area

Drawn By

Terracon

Author

JMc

File Name

sens topple Area 6 01L2 and May29 sidewinder data.dips7

Date

7/2/2020

# White Mtn. Data

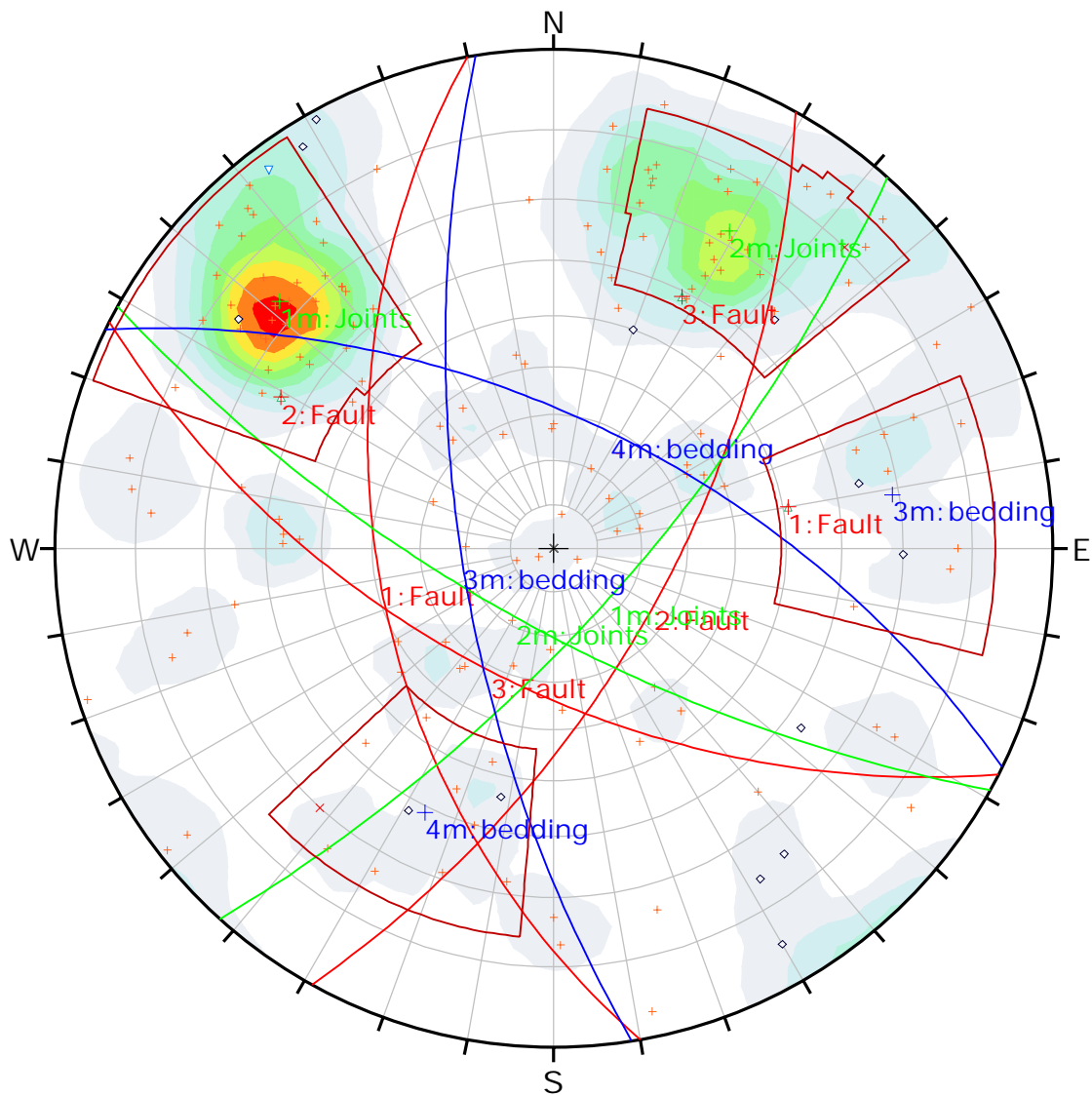
ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
1	76	126	1	Bedding	Dikes	Trm	5	Locality 4	6-01	1
2	62	189		Joint	Dikes	Trm	2	Locality 4	6-01	2
3	66	186		Joint	Dikes	Trm	2	Locality 4	6-01	2
4	20	205		Joint	Dikes	Trm	4	Locality 4	6-01	5
5	75	125	1	Joint	Dikes	Trm	5	Locality 4	6-01	1
6	57	44	4	Joint	Felsic dike	Jfeld	2	Locality 4	6-01	
7	67	118	1	Joint	Felsic dike	Jfeld	5	Locality 4	6-01	1
8	68	122	1	Joint	Felsic dike	Jfeld	4	Locality 4	6-01	1
9	72	126	1	Joint	Fv	Jfv1, Jfv2	5	Locality 4	6-01	1
10	77	195	2	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	2
11	73	131	1	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	1
12	63	127	1	Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	1
13	86	225		Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	3
14	80	123	1	Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	1
15	66	196	2	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	2
16	35	238		Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	
17	77	273	3	Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01	4
18	73	136	1	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	1
19	73	29	4	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	8
20	20	257		Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	
21	62	29	4	Bedding	Fv	Jfv1, Jfv2	4	Locality 4	6-01	8
22	21	248		Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	
23	57	93		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01	
24	34	241		Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	
25	73	131	1	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	1
26	71	126	1	Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01	1
27	28	19		Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	6
28	57	91		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01	
29	6	295		Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01	6
30	75	188		Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	2
31	81	253	3	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	4
32	54	12	4	Bedding	Fv	Jfv1, Jfv2	4	Locality 4	6-01	
33	70	130	1	Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01	1
34	71	208	2	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	2
35	81	188		Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01	2
36	54	92		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01	
37	87	348		Joint	Dikes		4	Locality 4	6-01	
38	4	60		Joint	Dikes		4	Locality 4	6-01	6
39	85	194		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	2
40	63	306		Bedding	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	
41	69	19	4	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	8
42	73	299		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	
43	46	336		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	
44	79	113	1	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	
45	43	51		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	
46	60	16	4	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01	8
47	83	135	1	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	1
48	64	209	2	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	2
49	88	240		Joint	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	3



ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
50	87	148		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
51	36	357		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	
52	65	101		Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01	
53	74	37	4	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01	7
54	15	255		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	
55	85	330		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
56	76	328		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
57	89	151		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
58	71	194	2	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	2
59	23	2		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	6
60	66	80		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	
61	71	140	1	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	1
62	78	204	2	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	2
63	84	138	1	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	1
64	77	74		Joint	Wht mtn ls	Mmc, Pbs	1	Locality 4	6-01	
65	86	52		Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01	7
66	75	323		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
67	87	143	1	Plane Type 1	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	1
68	77	206	2	Joint	Intrusive fgrnd	Trm	2	Locality 4	6-01	2
69	43	169		Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01	5
70	67	141	1	Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01	1
71	76	194	2	Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01	2
72	74	344		Joint	Intrusive fgrnd	Trm	1	Locality 4	6-01	
73	72	133	1	Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01	1
74	72	129	1	Joint	Intrusive fgrnd	Trm	3	Locality 4	6-01	1
75	40	59		Joint	Intrusive fgrnd	Trm	4	Locality 4	6-01	
76	9	72		Joint	Intrusive fgrnd	Trm	1	Locality 4	6-01	6
77	78	144	1	Joint	Intrusive fgrnd	Trm	2	Locality 4	6-01	1
78	74	77		Joint	Intrusive fgrnd	Trm	1	Locality 4	6-01	
79	19	30		Joint	Dikes		3	Locality 3	6-01	6
80	71	210	2	Joint	Dikes		2	Locality 3	6-01	2
81	65	252	3	Joint	Dikes		2	Locality 3	6-01	4
82	64	119	1	Fault	Dikes		4	Locality 3	6-01	1
83	59	207	2	Fault	Dikes		3	Locality 3	6-01	2
84	62	143	1	Joint	Wht mtn ls	Mmc	3	Locality 3	6-01	1
85	68	141	1	Joint	Wht mtn ls	Mmc	1	Locality 3	6-01	1
86	68	141	1	Joint	Wht mtn ls	Mmc	4	Locality 3	6-01	1
87	58	96		Joint	Wht mtn ls	Mmc	3	Locality 3	6-01	
88	69	136	1	Joint	Wht mtn ls	Mmc	3	Locality 3	6-01	1
89	38	324		Joint	Wht mtn ls	Mmc	4	Locality 3	6-01	
90	45	322		Joint	Wht mtn ls	Mmc	3	Locality 3	6-01	
91	50	200		Bedding	Wht mtn ls	Mmc	5	Locality 3	6-01	
92	82	129	1	Joint	Wht mtn ls	Mmc	2	Locality 3	6-01	1
93	33	137		Joint	Wht mtn ls	Mmc	3	Locality 3	6-01	
94	65	224	2	Bedding	Wht mtn ls	Mmc	4	Locality 3	6-01	3
95	60	134	1	Joint	Dikes	Mmc	2	Locality 3	6-01	1
96	83	306		Joint	Dikes	Mmc	3	Locality 3	6-01	
97	66	211	2	Joint	Dikes	Mmc	3	Locality 3	6-01	2
98	28	156		Joint	Dikes	Mmc	3	Locality 3	6-01	5

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
99	53	126		Joint	Dikes	Mmc	1	Locality 3	6-01	1
100	61	208	2	Joint	Dikes	Mmc	3	Locality 3	6-01	2
101	70	271	3	Bedding	Dikes	Mmc	5	Locality 3	6-01	4
102	64	258	3	Bedding	Dikes	Mmc	5	Locality 3	6-01	4
103	54	221		Joint	Dikes	Mmc	3	Locality 3	6-01	3
104	58	192		Joint	Dikes	Mmc	3	Locality 3	6-01	2
105	80	209	2	Joint	Dikes	Mmc	5	Locality 3	6-01	2
106	67	209	2	Joint	Dikes	Mmc	4	Locality 3	6-01	2
107	63	281	3	Joint	Dikes	Mmc	5	Locality 3	6-01	
108	69	257	3	Joint	Dikes	Mmc	4	Locality 3	6-01	4
109	72	209	2	Joint	Dikes	Mmc	2	Locality 3	6-01	2
110	78	95		Joint	Dikes	Mmc	3	Locality 3	6-01	
111	89	52		Joint	Dikes	Mmc	1	Locality 3	6-01	7
112	82	226	2	Joint	Dikes	Mmc	2	Locality 3	6-01	3
113	26	215		Joint	Dikes	Mmc	3	Locality 3	6-01	5
114	81	98		Joint	Dikes	Mmc	3	Locality 3	6-01	
115	66	223	2	Joint	Dikes	Mmc	3	Locality 3	6-01	3
116	33	37		Joint	Dikes	Mmc	4	Locality 3	6-01	6
117	87	140	1	Joint	Dikes	Mmc	4	Locality 3	6-01	1
118	32	49		Joint	Dikes	Mmc	2	Locality 3	6-01	6
119	70	42	4	Cleavage	Dikes	Mmc	1	Locality 3	6-01	7
120	34	38		Joint	Dikes	Mmc	3	Locality 3	6-01	6
121	80	205	2	Joint	Dikes	Mmc	2	Locality 3	6-01	2
122	62	138	1	Joint	Dikes	Mmc	2	Locality 3	6-01	1
123	55	22	4	Joint	Dikes		2	Locality 3	6-01	8
124	69	207	2	Joint	Dikes	Trm	4	Locality 3	6-01	2
125	85	138	1	Joint	Dikes	Trm	2	Locality 3	6-01	1
126	65	320		Joint	Dikes	Trm	3	Locality 3	6-01	
127	82	102		Joint	Dikes	Trm	3	Locality 3	6-01	
128	48	16	4	Joint	Dikes	Trm	1	Locality 3	6-01	
129	75	195	2	Joint	Dikes		2	Locality 3	6-01	2
130	74	195	2	Joint	Dikes		1	Locality 3	6-01	2
131	59	208	2	Joint	Dikes	Mmc	1	Locality 3	6-01	2
132	86	134	1	Joint	Dikes	Mmc	2	Locality 3	6-01	1
133	69	217	2	Joint	Dikes	Mmc	1	Locality 3	6-01	3
134	71	213	2	Joint	Dikes	Mmc	2	Locality 3	6-01	3
135	65	127	1	Joint	Dikes	Mmc	1	Locality 3	6-01	1
136	77	133	1	Joint	Dikes	Mmc	2	Locality 3	6-01	1
137	46	37	4	Joint	Dikes	Mmc	1	Locality 3	6-01	
138	53	195		Joint	Dikes	Mmc	2	Locality 3	6-01	
139	70	251	3	Joint	Dikes	Mmc	2	Locality 3	6-01	4
140	41	171		Joint	Dikes	Mmc	3	Locality 3	6-01	5
141	37	137		Joint	Dikes	Mmc	2	Locality 3	6-01	
142	72	217	2	Joint	Dikes	Mmc	1	Locality 3	6-01	3
143	70	176		Joint	Dikes	Mmc	1	Locality 3	6-01	
144	73	0		Joint	Dikes	Mmc	1	Locality 3	6-01	8
145	83	215	2	Joint	Dikes	Mmc	1	Locality 3	6-01	3
146	76	299		Joint	Dikes	Mmc	1	Locality 3	6-01	
147	27	179		Joint	Dikes	Mmc	2	Locality 3	6-01	5

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
148	80	224	2	Cleavage	Dikes	Mmc	3	Locality 3	6-01	3
149	82	242		Joint	Dikes	Trm	2	Locality 3	6-01	3
150	77	228	2	Joint	Dikes	Trm	3	Locality 3	6-01	3
151	17	228		Joint	Dikes	Trm	3	Locality 3	6-01	5
152	78	127	1	Joint	Dikes	Trm	4	Locality 3	6-01	1
153	37	244		Joint	Dikes	Trm	3	Locality 3	6-01	
154	51	260	3	Fault	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01	
155	28	180		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 3	6-01	5
156	68	8	4	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 3	6-01	8
157	77	359		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 3	6-01	8
158	75	143	1	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 3	6-01	1
159	29	111		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01	
160	54	131	1	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01	1
161	20	91		Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01	
162	40	250		Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01	
163	75	250	3	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01	4
164	41	232		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01	
165	8	193		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01	5
166	89	72		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 3	6-01	
167	78	270	3	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01	4
168	80	155		Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01	
169	71	126	1	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01	1
170	84	218	2	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01	3
171	37	147		Joint	Wht mtn ls	Mmc, Pbs	5	Locality 3	6-01	5



Symbol	TYPE	Quantity
◇	Bedding	13
×	Cleavage	2
△	Fault	3
+	Joint	152
▽	Plane Type 1	1

Color	Density Concentrations
	0.00 - 0.90
	0.90 - 1.80
	1.80 - 2.70
	2.70 - 3.60
	3.60 - 4.50
	4.50 - 5.40
	5.40 - 6.30
	6.30 - 7.20
	7.20 - 8.10
	8.10 - 9.00

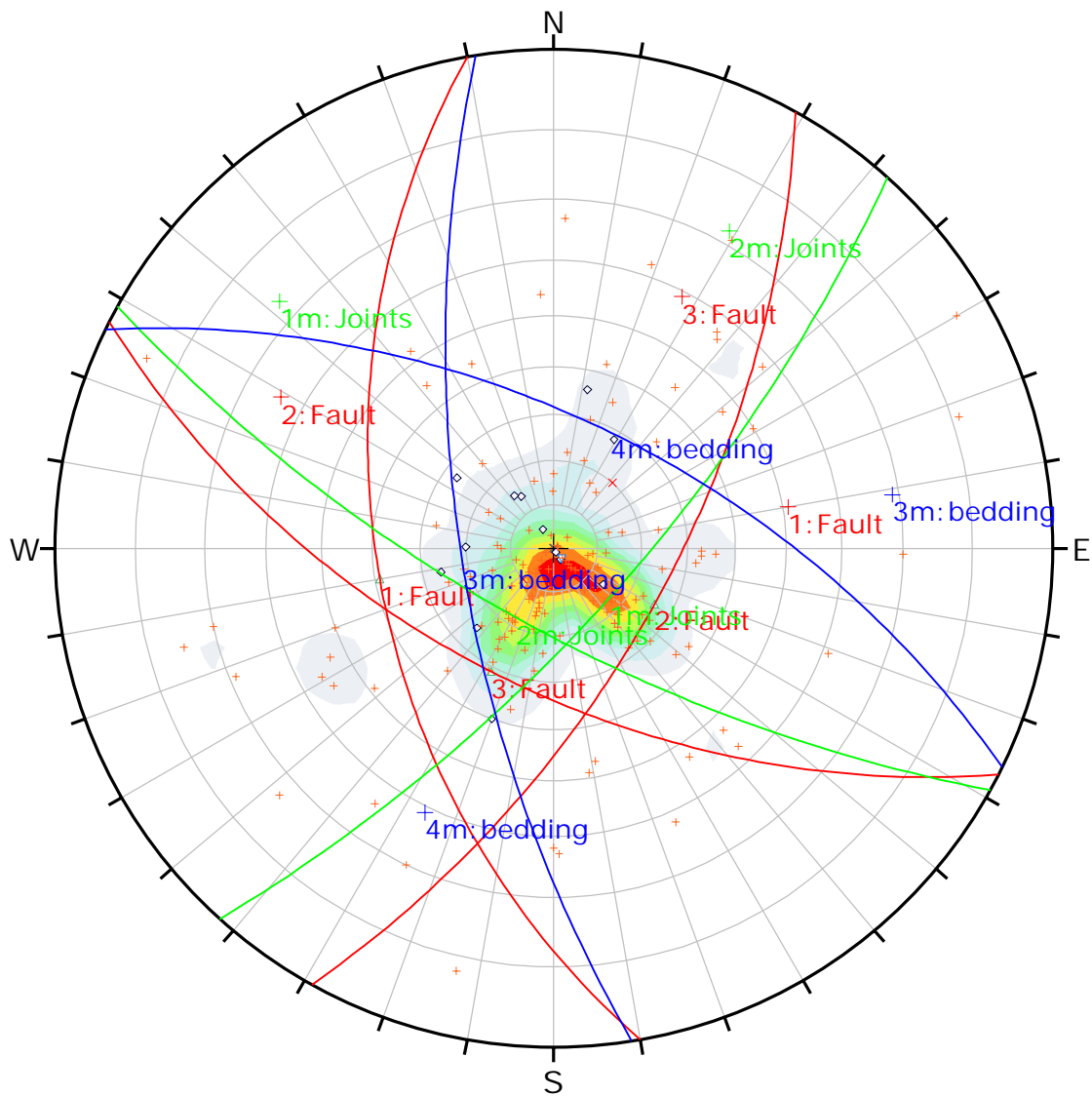
Contour Data	Pole Vectors
Maximum Density	8.48%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	171 (171 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	White Mtn (Area 6-01-L-3 + Area 6-01-L-4)		
Drawn By	Terracon	Author	JMc
File Name	Cemex Wht Mtn_Calchornfels.dips7	Date	7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	13
×	Cleavage	2
△	Fault	3
+	Joint	152
▽	Plane Type 1	1

Color	Density Concentrations
	0.00 - 1.50
	1.50 - 3.00
	3.00 - 4.50
	4.50 - 6.00
	6.00 - 7.50
	7.50 - 9.00
	9.00 - 10.50
	10.50 - 12.00
	12.00 - 13.50
	13.50 - 15.00

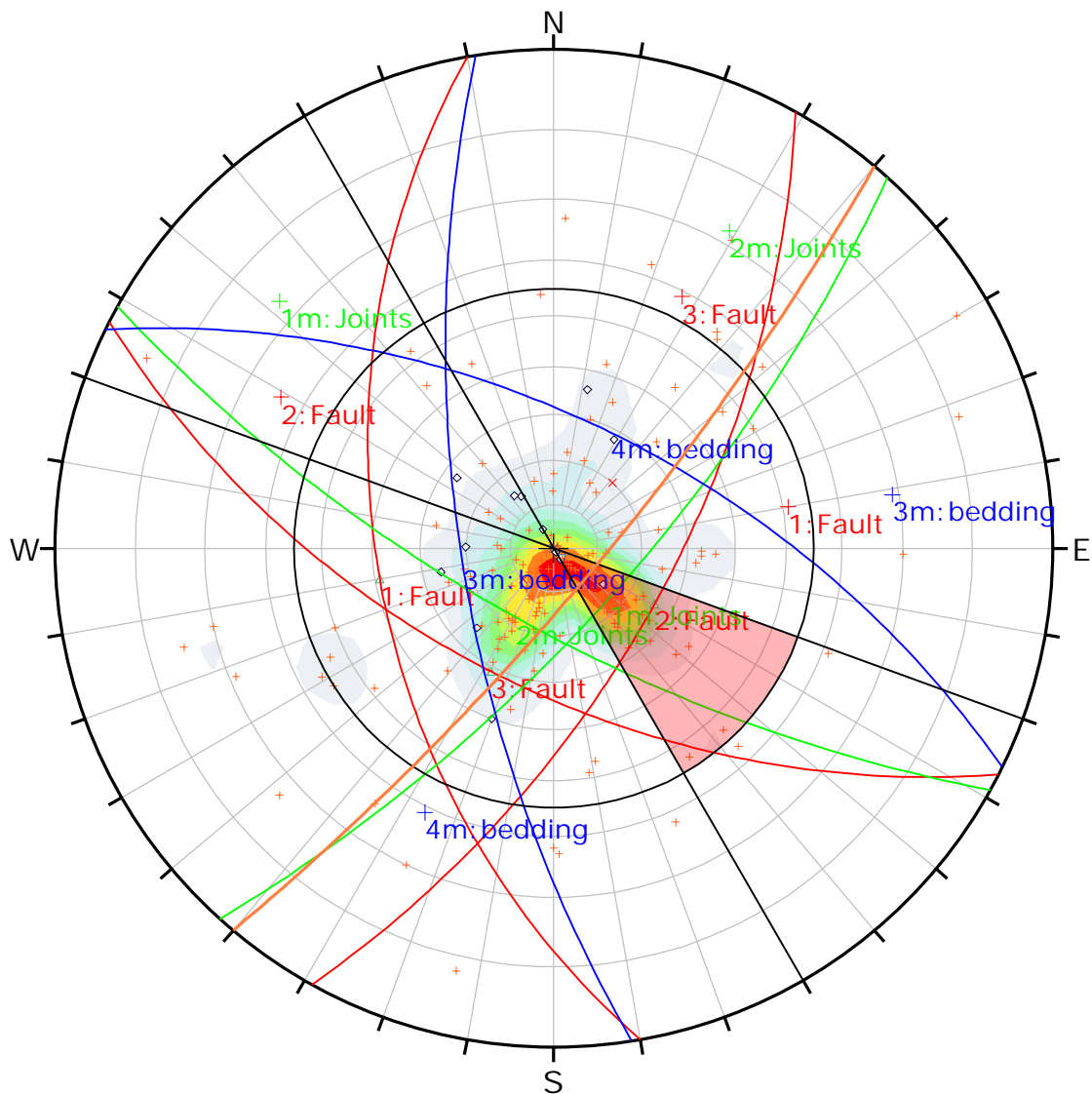
Contour Data	Dip Vectors
Maximum Density	14.85%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Dip Vectors
Vector Count	171 (171 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	White Mtn (Area 6-01-L-3 + Area 6-01-L-4)		
Drawn By	Terracon	Author	JMc
File Name	Cemex Wht Mtn_Calchornfels.dips7	Date	7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	13
×	Cleavage	2
△	Fault	3
+	Joint	152
▽	Plane Type 1	1

Color	Density Concentrations
	0.00 - 1.50
	1.50 - 3.00
	3.00 - 4.50
	4.50 - 6.00
	6.00 - 7.50
	7.50 - 9.00
	9.00 - 10.50
	10.50 - 12.00
	12.00 - 13.50
	13.50 - 15.00
Contour Data	
Maximum Density	
Contour Distribution	
Counting Circle Size	
Dip Vectors	
14.85%	
Fisher	
1.0%	

Kinematic Analysis	Planar Sliding			
Slope Dip	80			
Slope Dip Direction	130			
Friction Angle	35°			
Lateral Limits	20°			
		Critical	Total	%
Planar Sliding (All)		33	171	19.30%
Planar Sliding (Set 1: Joints)		30	38	78.95%

Plot Mode	Dip Vectors
Vector Count	171 (171 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project

Cemex Wht/Blk Mtn

Analysis Description

White Mtn (Area 6-01-L-3 + Area 6-01-L-4)

Drawn By

Terracon

Author

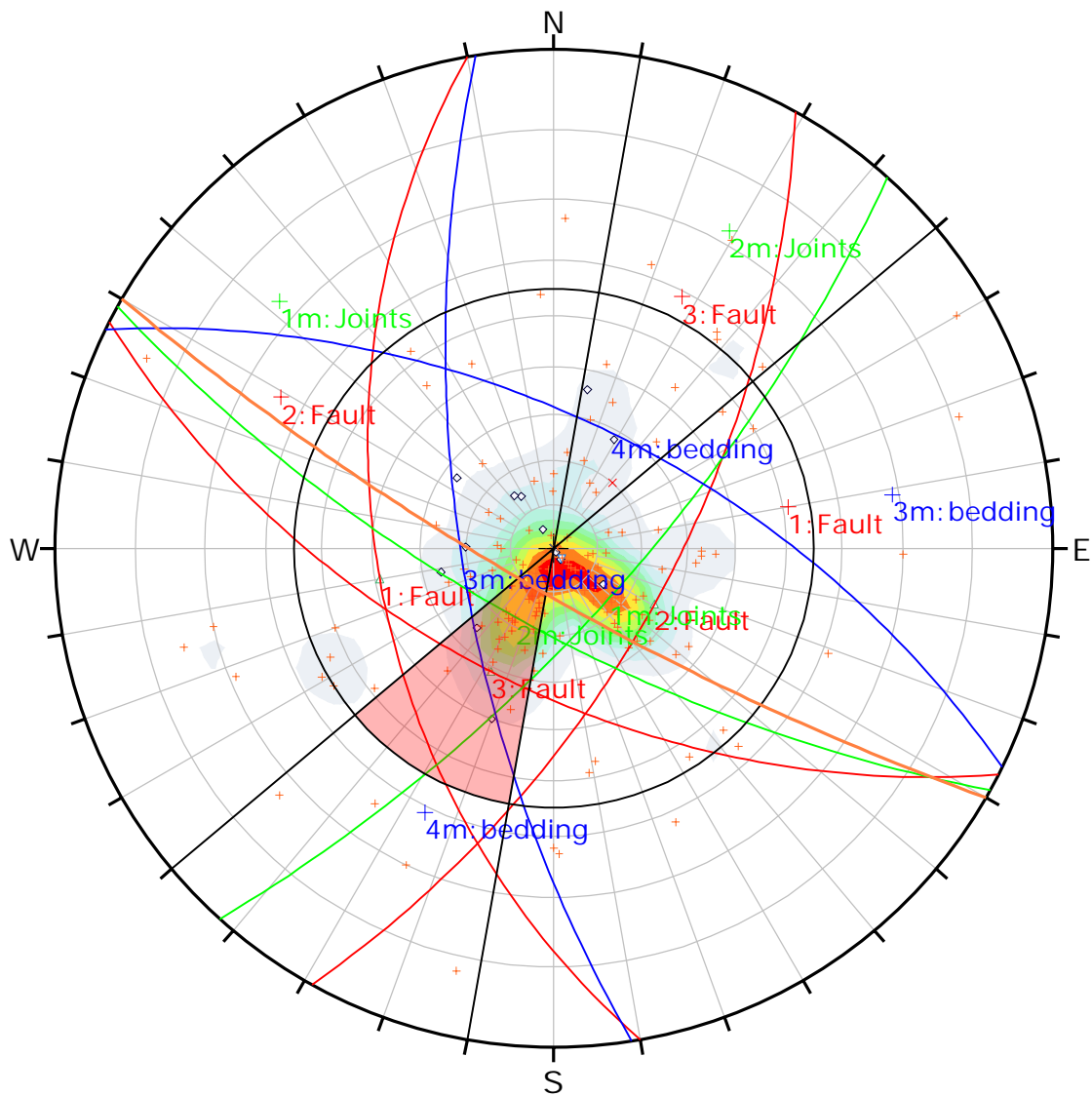
JMc

File Name

sens planar Cemex Wht Mtn\_Calchornfels.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	13
×	Cleavage	2
△	Fault	3
+	Joint	152
▽	Plane Type 1	1

Color	Density Concentrations
	0.00 - 1.50
	1.50 - 3.00
	3.00 - 4.50
	4.50 - 6.00
	6.00 - 7.50
	7.50 - 9.00
	9.00 - 10.50
	10.50 - 12.00
	12.00 - 13.50
	13.50 - 15.00
Contour Data	
Maximum Density	
Contour Distribution	
Counting Circle Size	
Dip Vectors	
14.85%	
Fisher	
1.0%	

Kinematic Analysis	Planar Sliding			
Slope Dip	80			
Slope Dip Direction	210			
Friction Angle	35°			
Lateral Limits	20°			
		Critical	Total	%
Planar Sliding (All)		28	171	16.37%
Planar Sliding (Set 2: Joints)		24	30	80.00%

Plot Mode	Dip Vectors
Vector Count	171 (171 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project

Cemex Wht/Blk Mtn

Analysis Description

White Mtn (Area 6-01-L-3 + Area 6-01-L-4)

Drawn By

Terracon

Author

JMc

File Name

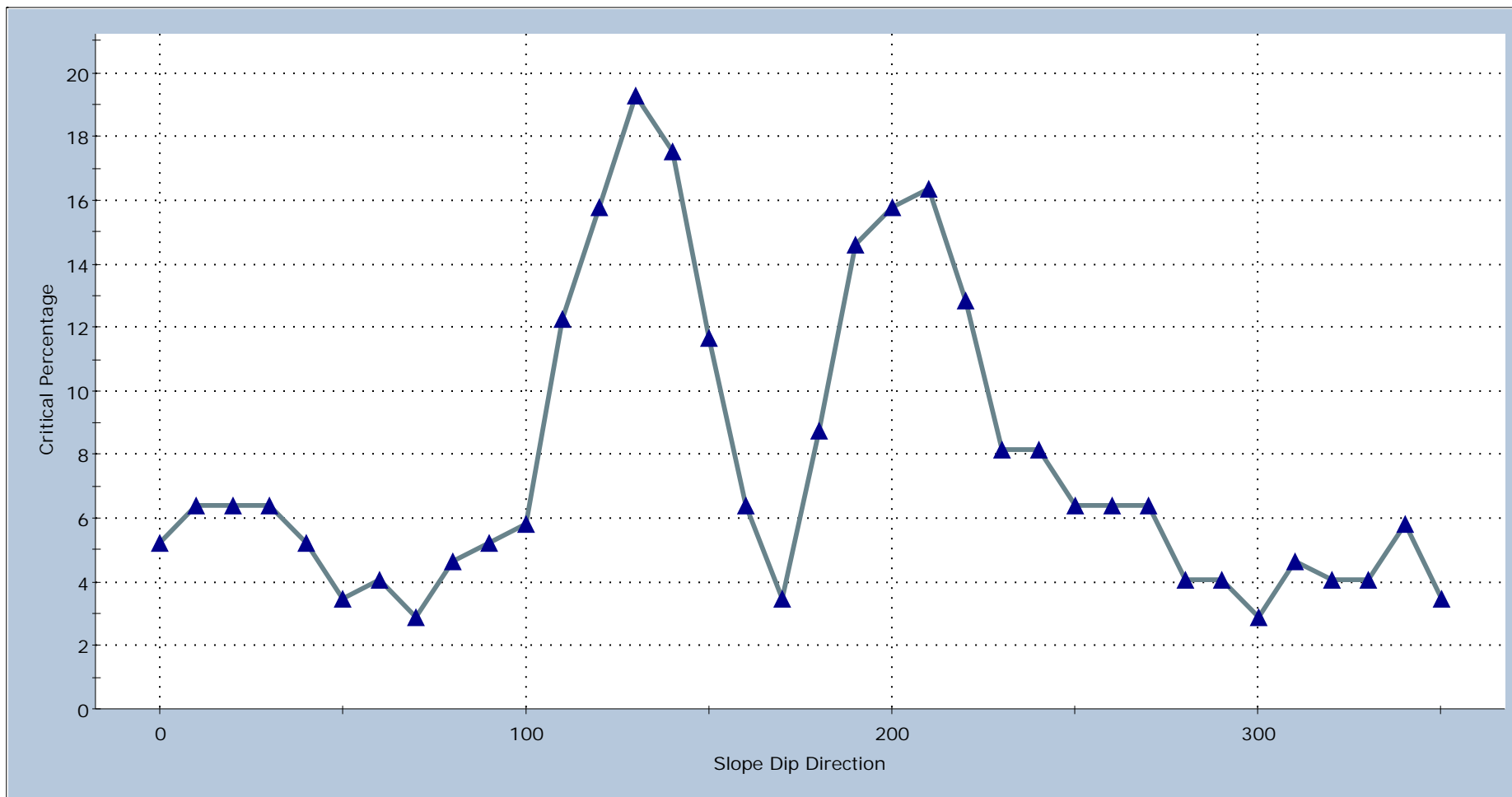
sens planar Cemex Wht Mtn\_Calchornfels.dips7

Date

7/2/2020



## Planar Sliding: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

# Terracon

Project

Cemex Wht/Blk Mtn

Analysis Description

White Mtn (Area 6-01-L-3 + Area 6-01-L-4)

Drawn By

Terracon

Author

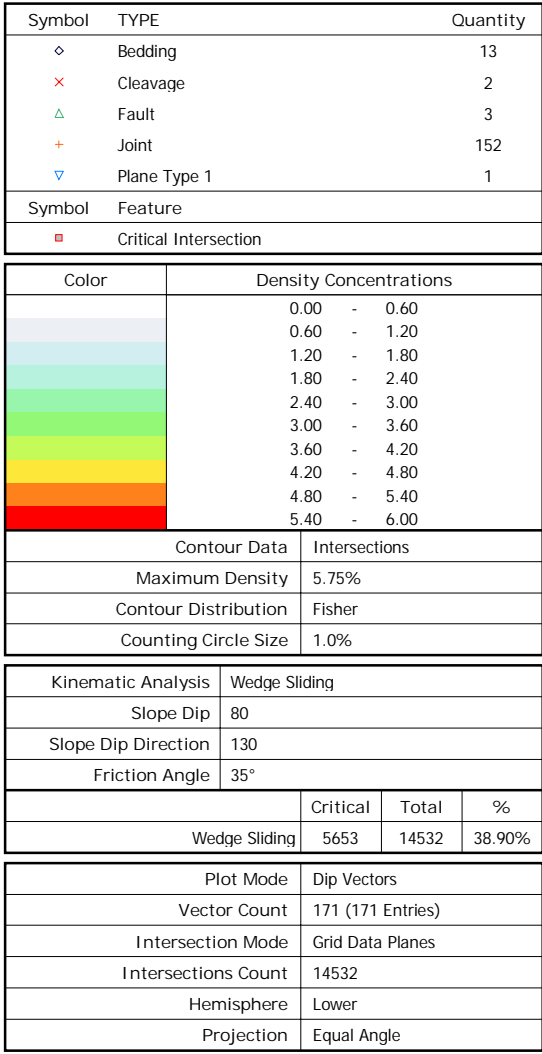
JMc

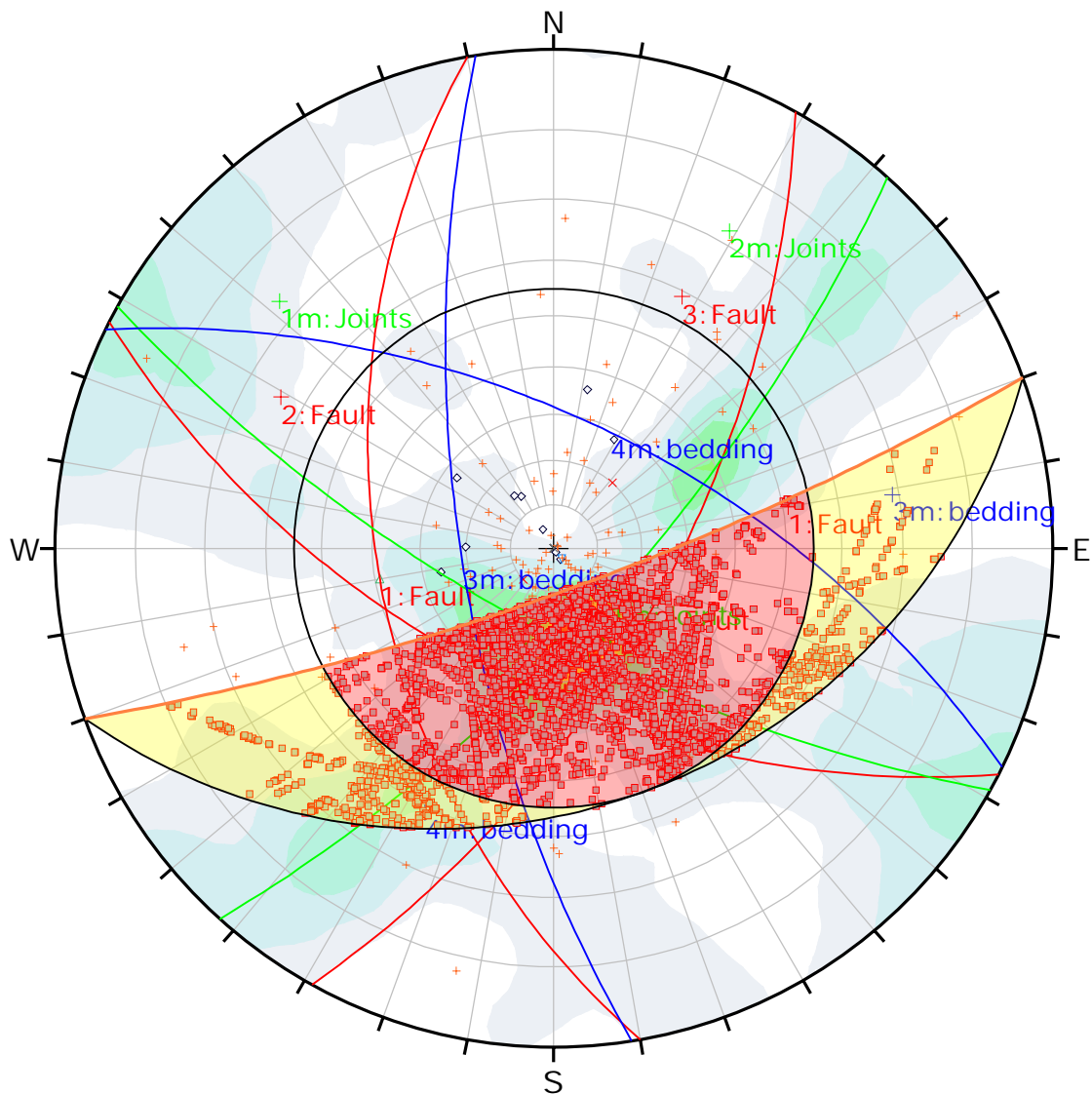
File Name

Cemex Wht Mtn\_Calchornfels.dips7

Date

7/2/2020





Symbol	TYPE	Quantity
◇	Bedding	13
×	Cleavage	2
△	Fault	3
+	Joint	152
▽	Plane Type 1	1
Symbol	Feature	
■	Critical Intersection	

Color	Density Concentrations
	0.00 - 0.60
	0.60 - 1.20
	1.20 - 1.80
	1.80 - 2.40
	2.40 - 3.00
	3.00 - 3.60
	3.60 - 4.20
	4.20 - 4.80
	4.80 - 5.40
	5.40 - 6.00

Contour Data	Intersections
Maximum Density	5.75%
Contour Distribution	Fisher
Counting Circle Size	1.0%

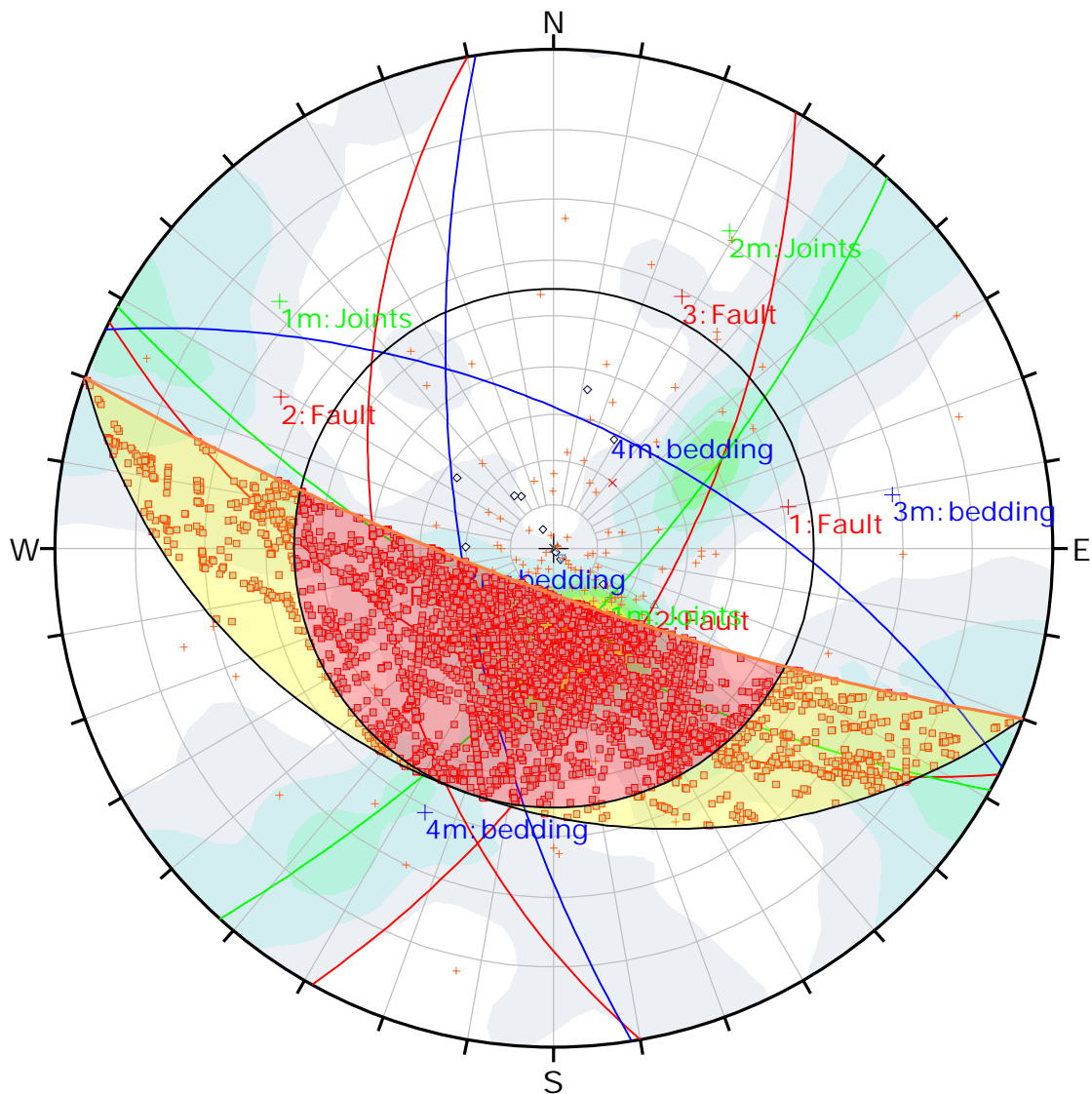
Kinematic Analysis	Wedge Sliding		
Slope Dip	80		
Slope Dip Direction	160		
Friction Angle	35°		
	Critical	Total	%
Wedge Sliding	4749	14532	32.68%

Plot Mode	Dip Vectors
Vector Count	171 (171 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	14532
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	White Mtn (Area 6-01-L-3 + Area 6-01-L-4)		
Drawn By	Terracon	Author	JMc
File Name	sens planar Cemex Wht Mtn_Calchornfels.dips7	Date	7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	13
×	Cleavage	2
△	Fault	3
+	Joint	152
▽	Plane Type 1	1
Symbol	Feature	
■	Critical Intersection	

Color	Density Concentrations
	0.00 - 0.60
	0.60 - 1.20
	1.20 - 1.80
	1.80 - 2.40
	2.40 - 3.00
	3.00 - 3.60
	3.60 - 4.20
	4.20 - 4.80
	4.80 - 5.40
	5.40 - 6.00

Contour Data	Intersections
Maximum Density	5.75%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding		
Slope Dip	80		
Slope Dip Direction	200		
Friction Angle	35°		
	Critical	Total	%
Wedge Sliding	5336	14532	36.72%

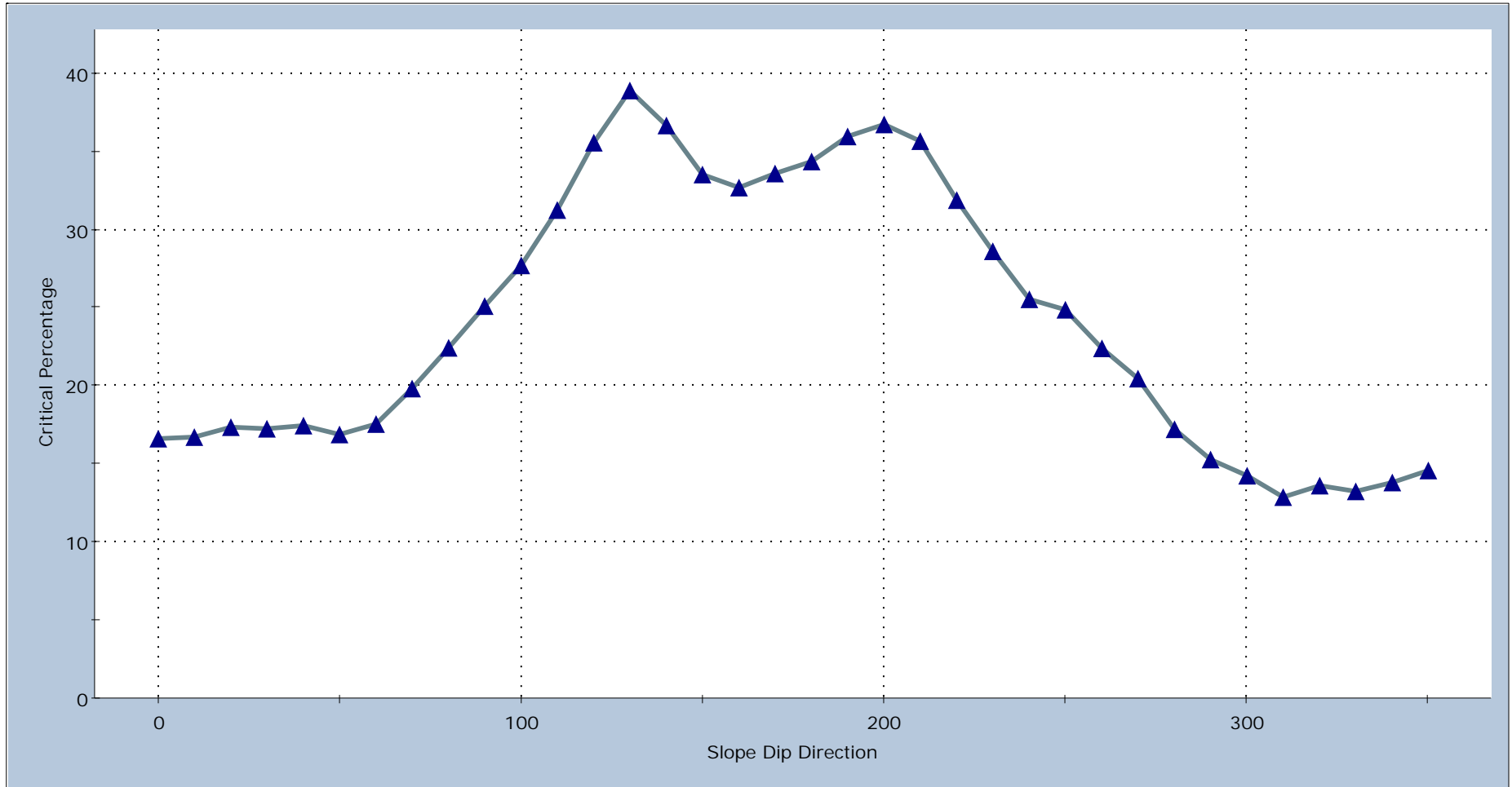
Plot Mode	Dip Vectors
Vector Count	171 (171 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	14532
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	White Mtn (Area 6-01-L-3 + Area 6-01-L-4)		
Drawn By	Terracon	Author	JMc
File Name	sens wedge Cemex Wht Mtn_Calchornfels.dips7	Date	7/2/2020

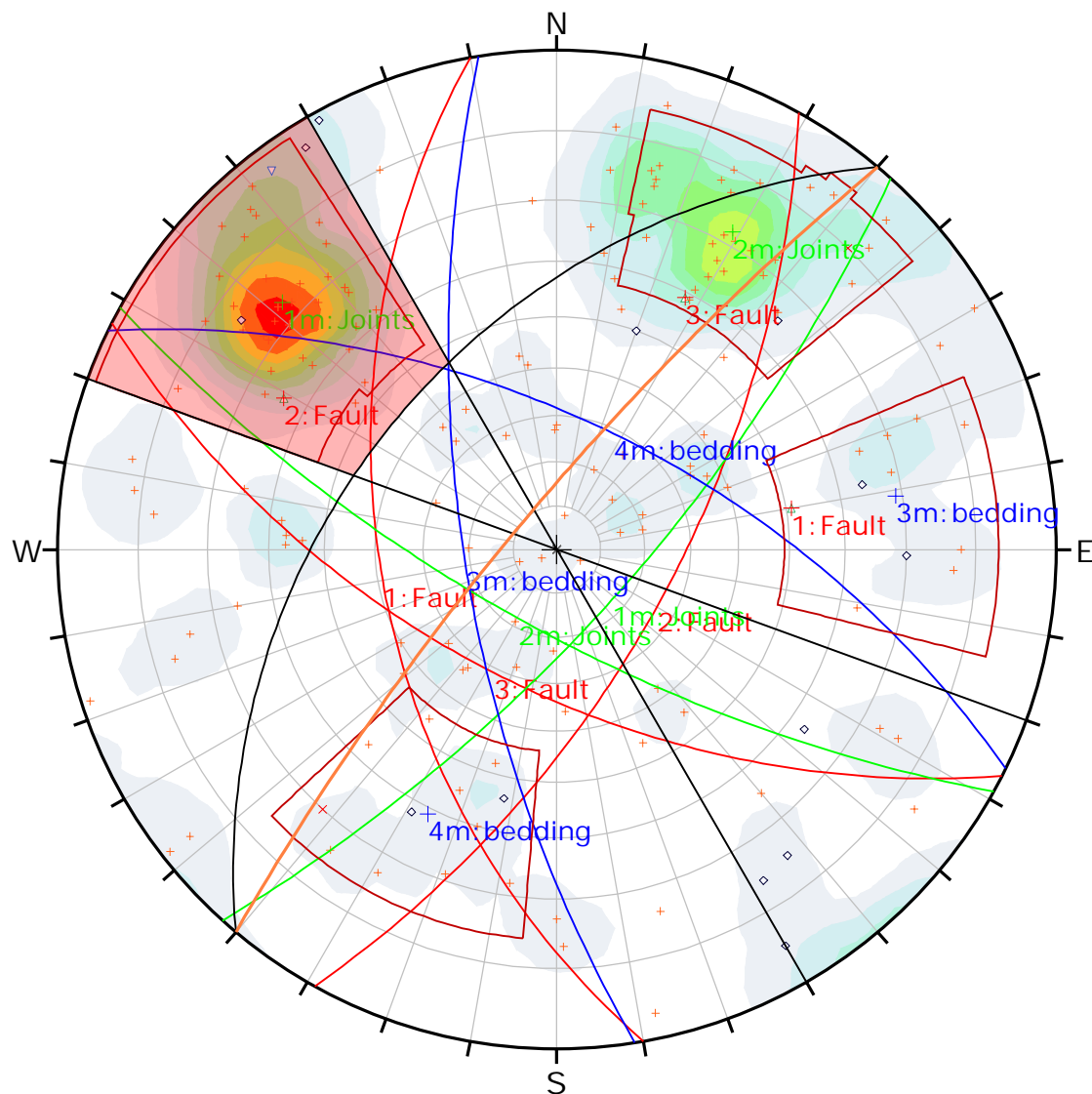
## Wedge Sliding: Critical Percentage vs. Slope Dip Direction



Mean Values  
 Slope Dip = 80      Slope Dip Direction = 210      Friction Angle = 35      Lateral Limit = 20

# Terracon

Project		Cemex Wht/Blk Mtn	
Analysis Description		White Mtn (Area 6-01-L-3 + Area 6-01-L-4)	
Drawn By		Terracon	Author JMc
File Name		sens planar Cemex Wht Mtn_Calchornfels.dips7	Date 7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	13
×	Cleavage	2
△	Fault	3
+	Joint	152
▽	Plane Type 1	1

Color	Density Concentrations
	0.00 - 0.90
	0.90 - 1.80
	1.80 - 2.70
	2.70 - 3.60
	3.60 - 4.50
	4.50 - 5.40
	5.40 - 6.30
	6.30 - 7.20
	7.20 - 8.10
	8.10 - 9.00

Contour Data	Pole Vectors
Maximum Density	8.48%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Flexural Toppling
Slope Dip	80
Slope Dip Direction	310
Friction Angle	35°
Lateral Limits	20°

	Critical	Total	%
Flexural Toppling (All)	40	171	23.39%
Flexural Toppling (Set 1: Joints)	38	38	100.00%

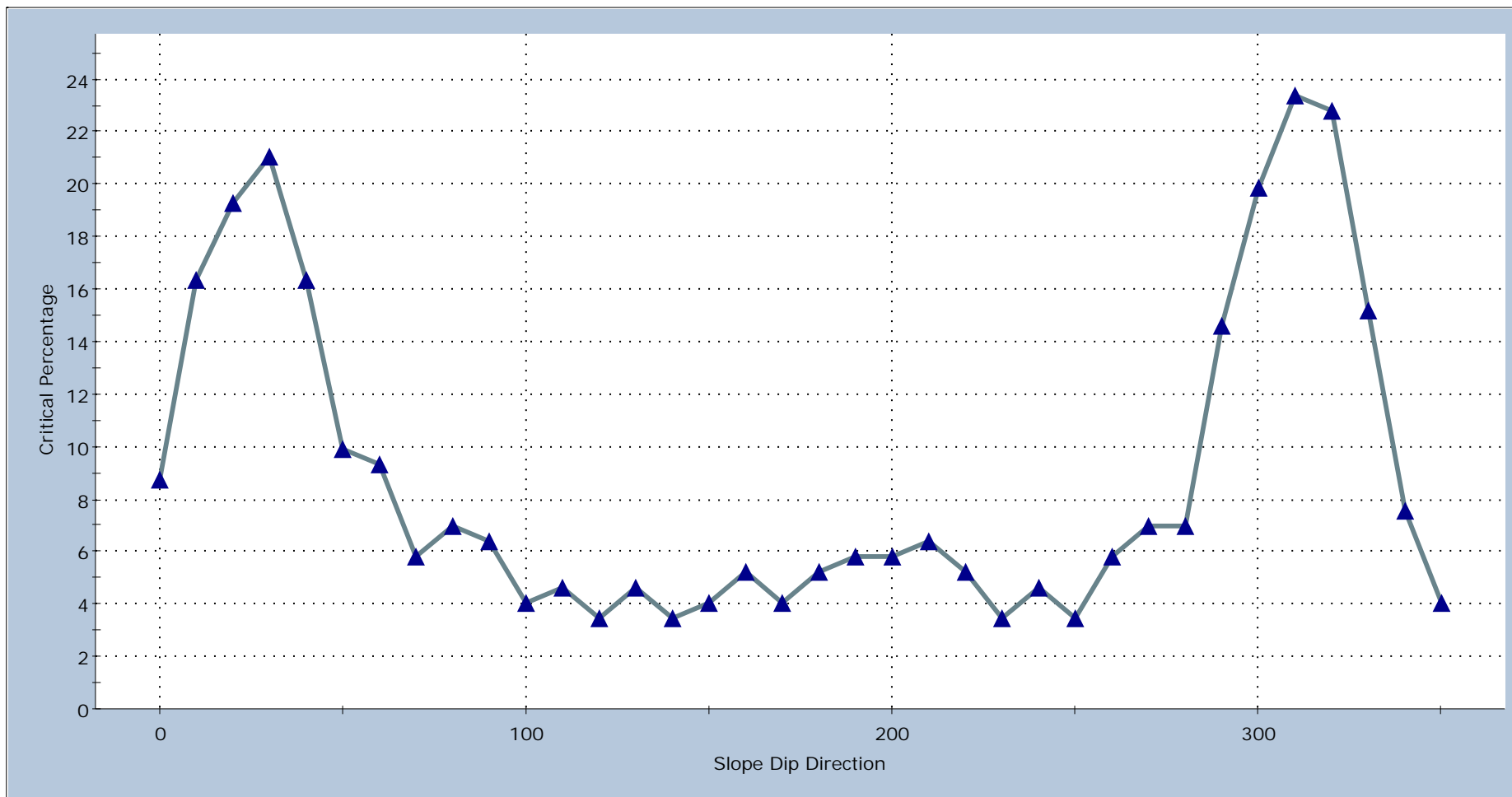
Plot Mode	Pole Vectors
Vector Count	171 (171 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	White Mtn Project Area		
Drawn By	Terracon	Author	JMc
File Name	topple Cemex Wht Mtn_Calchornfels.dips7	Date	7/13/2020

## Flexural Toppling: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

# Terracon

Project

Cemex Wht/Blk Mtn

Analysis Description

Black Mtn Project Area

Drawn By

Terracon

Author

JMc

File Name

topple Cemex Wht Mtn\_Calchornfels.dips7

Date

7/10/2020



## Jfv3 Area Data

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
1	76	126	2	Bedding	Dikes	Trm	5	Locality 4	6-01	1
2	62	189		Joint	Dikes	Trm	2	Locality 4	6-01	2
3	66	186		Joint	Dikes	Trm	2	Locality 4	6-01	2
4	20	205	5	Joint	Dikes	Trm	4	Locality 4	6-01	5
5	75	125	2	Joint	Dikes	Trm	5	Locality 4	6-01	1
6	57	44	1	Joint	Felsic dike	Jfeld	2	Locality 4	6-01	
7	67	118	2	Joint	Felsic dike	Jfeld	5	Locality 4	6-01	1
8	68	122	2	Joint	Felsic dike	Jfeld	4	Locality 4	6-01	1
9	72	126	2	Joint	Fv	Jfv1, Jfv2	5	Locality 4	6-01	1
10	77	195	3	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	2
11	73	131	2	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	1
12	63	127	2	Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	1
13	86	225	3	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	3
14	80	123	2	Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	1
15	66	196	3	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	2
16	35	238		Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	
17	77	273		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01	4
18	73	136	2	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	1
19	73	29	1	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	8
20	20	257		Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	
21	62	29	1	Bedding	Fv	Jfv1, Jfv2	4	Locality 4	6-01	8
22	21	248		Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	
23	57	93		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01	
24	34	241		Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	
25	73	131	2	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	1
26	71	126	2	Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01	1
27	28	19		Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	6
28	57	91		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01	
29	6	295		Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01	6
30	75	188		Joint	Fv	Jfv1, Jfv2	4	Locality 4	6-01	2
31	81	253	4	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	4
32	54	12	6	Bedding	Fv	Jfv1, Jfv2	4	Locality 4	6-01	
33	70	130	2	Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01	1
34	71	208	3	Joint	Fv	Jfv1, Jfv2	3	Locality 4	6-01	2
35	81	188		Joint	Fv	Jfv1, Jfv2	2	Locality 4	6-01	2
36	54	92		Joint	Fv	Jfv1, Jfv2	1	Locality 4	6-01	
37	87	348		Joint	Dikes		4	Locality 4	6-01	
38	4	60		Joint	Dikes		4	Locality 4	6-01	6
39	85	194		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	2
40	63	306		Bedding	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	
41	69	19	1	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	8
42	73	299		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	
43	46	336		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	
44	79	113		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	
45	43	51		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	
46	60	16	6	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01	8
47	83	135	2	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	1
48	64	209	3	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	2
49	88	240	4	Joint	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	3

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
50	87	148		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
51	36	357		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	
52	65	101		Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01	
53	74	37	1	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01	7
54	15	255		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	
55	85	330		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
56	76	328		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
57	89	151		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
58	71	194	3	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	2
59	23	2		Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	6
60	66	80		Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	
61	71	140	2	Joint	Wht mtn ls	Mmc, Pbs	4	Locality 4	6-01	1
62	78	204	3	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	2
63	84	138	2	Joint	Wht mtn ls	Mmc, Pbs	3	Locality 4	6-01	1
64	77	74		Joint	Wht mtn ls	Mmc, Pbs	1	Locality 4	6-01	
65	86	52	1	Joint	Wht mtn ls	Mmc, Pbs	2	Locality 4	6-01	7
66	75	323		Bedding	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	
67	87	143	2	Plane Type 1	Wht mtn ls	Mmc, Pbs	5	Locality 4	6-01	1
68	77	206	3	Joint	Intrusive fgnd	Trm	2	Locality 4	6-01	2
69	43	169		Joint	Intrusive fgnd	Trm	3	Locality 4	6-01	5
70	67	141	2	Joint	Intrusive fgnd	Trm	3	Locality 4	6-01	1
71	76	194	3	Joint	Intrusive fgnd	Trm	3	Locality 4	6-01	2
72	74	344		Joint	Intrusive fgnd	Trm	1	Locality 4	6-01	
73	72	133	2	Joint	Intrusive fgnd	Trm	3	Locality 4	6-01	1
74	72	129	2	Joint	Intrusive fgnd	Trm	3	Locality 4	6-01	1
75	40	59		Joint	Intrusive fgnd	Trm	4	Locality 4	6-01	
76	9	72		Joint	Intrusive fgnd	Trm	1	Locality 4	6-01	6
77	78	144	2	Joint	Intrusive fgnd	Trm	2	Locality 4	6-01	1
78	74	77		Joint	Intrusive fgnd	Trm	1	Locality 4	6-01	
79	76	27	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	8
80	59	137	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	1
81	66	20	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	8
82	57	127	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	1
83	86	28	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05	8
84	76	285		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	
85	52	146	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	1
86	79	106		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
87	70	112		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	
88	2	117		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05	6
89	22	55		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	6
90	57	163		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	
91	52	171		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
92	48	169		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
93	79	6		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	8
94	80	195	3	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	2
95	73	254	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	4
96	58	129	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	1
97	17	169	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	5
98	74	274		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	4

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
99	75	30	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	8
100	54	125	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	1
101	39	222		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
102	79	44	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	7
103	11	279		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	
104	19	158	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05	5
105	88	75	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
106	28	310		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	
107	66	250	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	4
108	79	132	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	1
109	68	141	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	1
110	69	38	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	7
111	63	159		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	
112	30	140	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	5
113	89	306		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	
114	42	156		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
115	75	342		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
116	73	192		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	2
117	8	244		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
118	6	344		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	6
119	73	74		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	
120	74	175		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05	
121	53	230		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	3
122	79	247	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	4
123	49	133		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	
124	50	151		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05	
125	22	226	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	5
126	68	346	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	
127	57	157		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	
128	74	40	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	7
129	20	24		Joint	DIKE			Locality 1	6-05	6
130	58	271		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	4
131	69	268	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	4
132	16	337		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	6
133	73	171		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	
134	75	34	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	8
135	11	324		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	6
136	14	15		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	6
137	54	121	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	
138	82	31	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	8
139	68	220	3	Fault	DIKE	Jfv3		Locality 1	6-05	3
140	8	228	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	
141	70	248	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	4
142	72	193	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	2
143	87	123		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	
144	71	56	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	7
145	68	36	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	7
146	57	165		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
147	2	355		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	6

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148	52	61		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	
149	66	255	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	4
150	48	142		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	
151	56	246		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
152	85	51	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	7
153	59	283		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05	
154	40	323		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
155	75	45	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	7
156	81	267	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	4
157	59	218	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	3
158	82	23	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	8
159	60	132	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	1
160	74	50	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	7
161	76	143	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	1
162	80	45	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	7
163	39	25		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
164	80	347		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
165	78	258	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	4
166	20	5		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	6
167	83	300		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	
168	86	267	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	4
169	81	223	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-05	3
170	81	121	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05	1
171	7	308		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-05	6
172	81	59		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-05	7
173	84	87		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-05	
174	75	28	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	8
175	74	52	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	7
176	55	265		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	4
177	30	332		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
178	69	150	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	1
179	75	49	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	7
180	18	2		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	6
181	83	54	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	7
182	61	219	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	3
183	87	72	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
184	55	235		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	3
185	74	287		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	
186	71	247	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	4
187	40	38		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
188	66	271		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	4
189	73	209	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	2
190	69	299		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
191	67	34	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	7
192	47	138		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
193	79	188		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	2
194	81	188		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	2
195	66	107		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
196	67	263	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	4

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
197	60	254	4	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	4
198	73	24	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	8
199	78	130	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	1
200	7	95		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	6
201	76	121	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	1
202	50	221		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
203	67	191		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	2
204	54	63		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
205	85	33	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	7
206	50	28		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
207	43	83		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
208	61	278		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	4
209	80	140	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	1
210	32	319		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
211	68	178		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	2
212	24	252		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
213	59	269		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	4
214	57	263		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	4
215	55	273		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	
216	53	271		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
217	87	215	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
218	65	166		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
219	85	335		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
220	49	246		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
221	56	244		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	3
222	75	205	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	2
223	73	124	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	1
224	33	283		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3		Locality 1	6-05	
225	70	228	3	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-05	3
226	80	34	1	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	8
227	76	212	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	2
228	74	219	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	3
229	80	221	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	3
230	78	212	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	2
231	45	322		Joint	Jqz	Jqz	5	Locality 1	6-05	
232	39	148		Joint	Jqz	Jqz		Locality 1	6-05	
233	43	329		Joint	Jqz	Jqz		Locality 1	6-05	
234	45	135		Joint	Jqz	Jqz		Locality 1	6-05	
235	59	342		Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
236	64	8	6	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
237	67	356	6	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
238	76	126	2	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	1
239	79	278		Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	4
240	78	138	2	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	1
241	81	105		Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	
242	85	287		Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	
243	87	9		Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	8
244	84	202	3	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	2
245	61	332		Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	

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246	65	348	6	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
247	60	341		Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
248	63	2	6	Bedding	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
249	73	7		Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
250	73	4		Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
251	56	215	3	Cleavage	Jfv lower tectonized	Jfv4l		Locality 1	6-05	
252	68	198	3	Cleavage	Jfv lower tectonized	Jfv4l		Locality 1	6-05	2
253	70	1	6	shear zone	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
254	66	2	6	shear zone	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	8
255	71	204	3	Joint	Jfv lower tectonized	Jfv4l		Locality 1	6-05	2
256	44	153		Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05	
257	48	342		Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
258	76	118	2	Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	1
259	72	250	4	Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	4
260	79	93		Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05	
261	63	270		Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05	4
262	30	223		Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05	
263	85	47	1	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-05	7
264	48	1	6	shear zone	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	
265	78	27	1	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	8
266	73	33	1	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-05	8
267	77	245	4	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	3
268	39	105		Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	
269	83	243	4	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
270	50	357	6	shear zone	Jfv upper	Jfv4u	5	Locality 1	6-05	
271	51	117		Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	
272	70	247	4	shear zone	Jfv upper	Jfv4u	5	Locality 1	6-05	4
273	64	245	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
274	86	226	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
275	56	236		Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	3
276	79	235	4	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
277	84	260	4	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	4
278	50	95		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
279	74	224	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
280	78	250	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	4
281	58	233		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
282	66	261	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4
283	68	234	4	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
284	81	275		Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	4
285	34	10		Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-05	6
286	56	212	3	Joint	Jqz	Jqz	3	Locality 1	6-05	
287	87	266	4	Joint	Jqz	Jqz	2	Locality 1	6-05	4
288	42	198		Joint	Jqz	Jqz	3	Locality 1	6-05	5
289	87	228	3	Joint	Jqz	Jqz	2	Locality 1	6-05	3
290	51	141	2	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05	1
291	41	256		Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05	
292	65	148	2	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-05	1
293	13	274		Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	
294	52	179		Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
295	56	181		Joint	Jfv lower tectonized	Jfv4l	1	Locality 1	6-05	
296	81	266	4	Joint	Jfv lower tectonized	Jfv4l	2	Locality 1	6-05	4
297	52	137	2	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-05	1
298	77	260	4	shear zone	Jfv upper	Jfv4u	2	Locality 1	6-05	4
299	51	7	6	shear zone	Jfv upper	Jfv4u	4	Locality 1	6-05	
300	63	328		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
301	72	226	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	3
302	79	247	4	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	4
303	79	206	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	2
304	56	309		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
305	72	222	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	3
306	63	307		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
307	57	351	6	shear zone	Jfv upper	Jfv4u		Locality 1	6-05	
308	54	316		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
309	87	260	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4
310	22	177	5	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	5
311	32	180	5	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	5
312	81	38	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	7
313	59	313		Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	
314	85	248	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4
315	63	241	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	3
316	42	101		Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	
317	82	258	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	4
318	89	55		Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	7
319	72	229	3	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	3
320	71	235	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	3
321	86	116		Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	
322	65	236	4	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
323	36	223		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
324	77	292		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
325	82	242	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
326	70	75		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
327	69	229	3	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	3
328	83	286		Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	
329	24	8		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	6
330	59	224	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	3
331	36	287		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
332	81	235	4	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	3
333	82	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4
334	88	320		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
335	83	230	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
336	84	128	2	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	1
337	46	130		Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	
338	86	44	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	7
339	81	320		Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	
340	15	192	5	Joint	Jfv upper	Jfv4u	1	Locality 1	6-05	5
341	62	231		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	3
342	44	259		Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	
343	82	257	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	4



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344	62	210	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-05	2
345	37	126		Joint	Jfv upper	Jfv4u	4	Locality 1	6-05	
346	72	225	3	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	3
347	89	37	1	Cleavage	Jfv upper	Jfv4u	5	Locality 1	6-05	7
348	84	236	4	Joint	Jfv upper	Jfv4u	2	Locality 1	6-05	3
349	55	5	6	Cleavage	Jfv upper	Jfv4u		Locality 1	6-05	
350	88	35	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-05	7
351	63	97		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	
352	70	358	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	8
353	36	192	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	5
354	66	131	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	1
355	70	20	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	8
356	89	182		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
357	52	352	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	
358	59	131	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	1
359	55	350	6	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	
360	69	31	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	8
361	74	138	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	1
362	32	225		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	
363	84	6		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	8
364	81	134	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	1
365	29	218	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	5
366	72	24	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	8
367	83	261	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	4
368	80	139	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	1
369	51	356	6	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	
370	69	33	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	8
371	38	183	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	5
372	80	26	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	8
373	59	123	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	1
374	75	11		Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	8
375	65	28	1	Joint	DIKE	Jfv3	5	Locality 1	6-11	8
376	42	213		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	
377	19	256		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	
378	64	90		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	
379	70	135	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	1
380	72	19	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	8
381	76	34	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	8
382	53	276		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-11	
383	73	171		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	
384	56	136	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-11	1
385	64	286		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	1	Locality 1	6-11	
386	81	29	1	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	8
387	65	52	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	7
388	76	151	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	1
389	62	228	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	3
390	71	142	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	1
391	40	98		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	2	Locality 1	6-11	
392	69	10	6	Bedding	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	8

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393	59	105		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	
394	89	217	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	7
395	28	119		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
396	40	167	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	5
397	67	49	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	7
398	39	172	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	5
399	49	203		Joint	DIKE	Jfv3	5	Locality 1	6-11	
400	60	126	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	1
401	80	235	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	3
402	86	237	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	3
403	77	152	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	1
404	68	255	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	4
405	68	171		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	
406	33	51		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	6
407	21	139	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	5
408	78	113		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
409	81	223	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	3
410	87	122		Fault	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	
411	28	153	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	5
412	89	295		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	
413	78	26	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	8
414	74	247	4	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	4
415	64	122	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	1
416	35	44		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	6
417	17	45		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	6
418	78	130	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	1
419	30	143	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	5
420	39	235		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
421	79	112		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
422	75	24	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	8
423	89	106		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	
424	74	26	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	8
425	71	331		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
426	89	135	2	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	1
427	37	158	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	5
428	22	49		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	6
429	89	134	2	Joint	DIKE	Jfv3	5	Locality 1	6-11	1
430	18	23		Joint	DIKE	Jfv3	5	Locality 1	6-11	6
431	33	351		Joint	DIKE	Jfv3	5	Locality 1	6-11	6
432	83	53	1	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	7
433	77	208	3	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	2
434	89	155		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	5	Locality 1	6-11	
435	76	170		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
436	72	103		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
437	22	51		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	6
438	40	161	5	Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	5
439	63	322		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
440	66	319		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	4	Locality 1	6-11	
441	60	316		Joint	Jf3 calc hornfels. Ls. Cgl	Jfv3	3	Locality 1	6-11	

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442	30	20		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
443	78	151	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
444	70	143	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
445	74	130	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
446	77	51	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
447	56	167		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
448	71	39	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
449	76	61		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
450	70	319		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
451	65	127	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
452	66	52	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
453	8	291		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
454	21	10		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	6
455	74	142	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
456	88	241	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
457	65	116	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
458	52	46		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
459	67	122	2	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	1
460	71	51	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
461	66	214	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
462	61	56		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
463	89	149		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
464	79	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
465	45	68		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
466	70	54	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
467	62	130	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
468	18	50		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	6
469	77	40	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
470	65	134	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
471	37	262		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
472	79	259	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
473	53	128	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
474	55	41		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
475	53	146	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
476	60	43	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
477	68	41	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
478	71	154	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
479	62	39	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
480	65	70		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
481	51	156		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
482	61	113		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
483	64	48	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
484	12	206	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	5
485	89	205	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	2
486	89	16		Fault	Jfv upper	Jfv4u	5	Locality 1	6-11	8
487	73	70		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
488	42	184	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	5
489	59	266		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
490	49	353	6	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	

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491	82	236	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
492	82	262	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
493	78	240	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
494	73	45	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
495	24	150	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	5
496	77	48	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
497	67	299		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
498	69	291		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
499	36	352		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
500	75	2		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	8
501	84	243	4	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
502	60	347	6	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
503	81	245	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
504	83	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
505	63	339		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
506	85	275		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
507	79	11		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	8
508	58	345	6	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
509	70	210	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
510	89	201	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11	2
511	20	219	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	5
512	81	223	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
513	80	208	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	2
514	84	273		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
515	69	203	3	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	2
516	53	248		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
517	78	203	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
518	79	207	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
519	61	312		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
520	81	208	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
521	84	132	2	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	1
522	80	229	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
523	57	312		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
524	81	210	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
525	53	321		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
526	73	192		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
527	57	304		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
528	82	140	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
529	84	34	1	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11	7
530	20	291		Joint	DIKE	Jfv4u	5	Locality 1	6-11	
531	65	323		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
532	75	153	2	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	1
533	58	145	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
534	49	148		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
535	84	51	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
536	82	243	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
537	69	206	3	Joint	DIKE	Jfv4u	5	Locality 1	6-11	2
538	82	79		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
539	82	241	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
540	79	224	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
541	81	125	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
542	20	264		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
543	77	211	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	2
544	53	337		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
545	79	219	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11	3
546	42	337		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
547	82	249	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
548	84	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
549	23	267		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
550	51	223		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
551	89	14		Fault	Jfv upper	Jfv4u	5	Locality 1	6-11	8
552	59	311		Bedding	Jfv upper	Jfv4u	4	Locality 1	6-11	
553	62	287		Bedding	Jfv upper	Jfv4u	2	Locality 1	6-11	
554	81	211	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-11	2
555	34	248		Plane Type 1	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11	
556	53	135	2	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	1
557	68	212	3	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	2
558	67	294		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
559	88	218	3	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	7
560	81	320		Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	
561	57	241		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	3
562	76	69		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	7
563	77	294		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
564	83	317		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
565	74	295		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
566	49	226		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
567	67	195	3	Fault	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	2
568	74	240	4	Joint	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11	3
569	70	330		Joint	Intrusive blkgy gry felds andes?	Jqmp	2	Locality 1	6-11	
570	82	69		Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11	7
571	79	139	2	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11	1
572	22	286		Joint	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11	
573	80	224	3	Joint	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11	3
574	69	151	2	Joint	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11	1
575	81	259	4	Joint	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11	4
576	65	141	2	Joint	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11	1
577	9	23		Joint	Intrusive blkgy gry felds andes?	Jqmp	2	Locality 1	6-11	6
578	67	137	2	Joint	Intrusive blkgy gry felds andes?	Jqmp	5	Locality 1	6-11	1
579	17	172	5	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11	5
580	76	7		Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11	8
581	52	216		Joint	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11	
582	41	142		Fault	Intrusive blkgy gry felds andes?	Jqmp	4	Locality 1	6-11	
583	64	199	3	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11	2
584	14	25		Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11	6
585	72	124	2	Joint	Intrusive blkgy gry felds andes?	Jqmp	3	Locality 1	6-11	1
586	18	167	5	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	5
587	54	87		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
588	85	25	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	8

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
589	77	41	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
590	61	131	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
591	85	66		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
592	77	328		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
593	29	62		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
594	20	78		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
595	17	239		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
596	82	151	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
597	86	69	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
598	58	234		Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	3
599	75	70		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
600	16	96		Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	
601	77	213	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
602	88	127		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
603	29	94		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
604	69	102		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
605	66	224	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
606	72	202	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
607	78	194	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
608	76	55	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	7
609	41	131		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
610	46	244		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
611	41	169	5	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	5
612	87	70	4	Fault	Jfv upper	Jfv4u	5	Locality 1	6-11	
613	48	152		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
614	71	210	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
615	70	17	6	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	8
616	25	134	5	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	5
617	81	217	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
618	43	180		Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	5
619	26	135	5	Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	5
620	58	329		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
621	81	111		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
622	82	246	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
623	72	128	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
624	70	332		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
625	64	229	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
626	64	63		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
627	30	140	5	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	5
628	86	54	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	7
629	82	204	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
630	77	316		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
631	30	137	5	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	5
632	76	5		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	8
633	81	321		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
634	24	124	5	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
635	69	326		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
636	75	220	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
637	58	218	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3

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638	89	27	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	8
639	58	310		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
640	81	228	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
641	70	192	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	2
642	55	104		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
643	85	76	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
644	61	143	2	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	1
645	62	335		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
646	55	255		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
647	19	350		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	6
648	88	41	1	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
649	88	61		Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	7
650	66	244	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
651	80	238	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
652	68	271		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
653	68	117	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
654	66	83		Joint	Jfv upper	Jfv4u	2	Locality 1	6-11	
655	79	239	4	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	3
656	79	65		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	7
657	54	166		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
658	74	236	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
659	78	279		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	4
660	64	126	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
661	70	344	6	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
662	66	150	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
663	66	294		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
664	70	103		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
665	52	49		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
666	75	269	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	4
667	60	128	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
668	65	129	2	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	1
669	76	91		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
670	58	39	1	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11	
671	62	156	2	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	
672	76	251	4	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	4
673	54	231		Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	3
674	70	239	4	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	3
675	81	107		Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	
676	62	238	4	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	3
677	61	215	3	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	3
678	69	261	4	Joint	Jfv lower tectonized	Jfv4l	5	Locality 1	6-11	4
679	72	111		Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	
680	63	247	4	Joint	Jfv lower tectonized	Jfv4l	4	Locality 1	6-11	4
681	74	251	4	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11	4
682	76	229	3	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11	3
683	38	166	5	Joint	Jfv lower tectonized	Jfv4l	3	Locality 1	6-11	5
684	27	8		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	6
685	70	67		Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	7
686	45	346	6	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	



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687	82	230	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
688	58	91		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
689	76	127	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	1
690	86	77	4	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
691	37	347		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
692	54	238		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
693	80	218	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	3
694	27	342		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	6
695	68	209	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
696	79	115		Joint	Jfv upper	Jfv4u	4	Locality 1	6-11	
697	77	243	4	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	3
698	35	350		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	
699	81	32	1	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	8
700	89	186		Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
701	78	18	1	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	8
702	75	212	3	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	2
703	48	351	6	Joint	Jfv upper	Jfv4u	3	Locality 1	6-11	
704	66	139	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-11	1
705	86	51	1	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-12	7
706	74	219	3	Bedding	Jfv upper	Jfv4u	5	Locality 1	6-12	3
707	74	353		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	
708	11	186	5	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	5
709	77	228	3	Fault	Jfv upper	Jfv4u	5	Locality 1	6-12	3
710	83	83		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
711	52	0	6	Joint	Jfv upper	Jfv4u		Locality 1	6-12	
712	83	198	3	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	2
713	7	173	5	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	5
714	41	38		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
715	86	108		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
716	81	67		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	7
717	60	139	2	Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	1
718	18	146	5	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12	5
719	68	153	2	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	1
720	34	306		Joint	Jfv upper	Jfv4u	2	Locality 1	6-12	
721	64	75		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	
722	80	275		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	4
723	47	76		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
724	41	271		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	
725	82	61		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	7
726	55	120	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	
727	58	109		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
728	37	309		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
729	57	268		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	4
730	61	144	2	Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	1
731	49	123		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
732	89	183		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	
733	74	108		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
734	80	291		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	
735	73	144	2	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12	1

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736	69	164		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
737	59	307		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
738	82	15		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	8
739	46	289		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	
740	65	166		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	
741	46	68		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
742	54	290		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
743	79	188		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	2
744	61	303		Fault	Jfv upper	Jfv4u	4	Locality 1	6-12	
745	72	241	4	Joint	Jfv upper	Jfv4u	2	Locality 1	6-12	3
746	45	338		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
747	59	286		Joint	Jfv upper	Jfv4u	5	Locality 1	6-12	
748	80	321		Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	
749	86	245	4	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	3
750	86	212	3	Joint	Jfv upper	Jfv4u	4	Locality 1	6-12	2
751	88	163		Joint	Jfv upper	Jfv4u	3	Locality 1	6-12	
752	39	178	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
753	55	230		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	3
754	34	151	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
755	51	334		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
756	74	41	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
757	25	16		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	6
758	84	332		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
759	60	229		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	3
760	56	153		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
761	68	115	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
762	32	214	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
763	34	1		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	6
764	66	32	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	8
765	29	185	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
766	74	46	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	7
767	80	151	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
768	61	14	6	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
769	25	34		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	6
770	67	100		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
771	21	196	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
772	32	196	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
773	76	351		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
774	19	149	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
775	81	10		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	8
776	70	136	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	1
777	68	40	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	7
778	70	92		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
779	79	139	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
780	44	176		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
781	67	29	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
782	70	155	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	1
783	53	25		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
784	76	39	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
785	45	185		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
786	72	353		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	
787	69	43	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	7
788	74	195	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	2
789	71	136	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	1
790	28	153	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
791	73	331		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
792	44	242		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
793	48	149		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	
794	73	240	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	3
795	72	46	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	7
796	64	96		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	
797	44	266		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
798	33	169	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
799	61	10	6	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
800	60	141	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
801	69	7	6	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
802	74	271		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	4
803	78	51	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	7
804	75	184		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	2
805	29	197	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
806	28	224		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
807	76	49	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
808	81	119	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
809	29	169	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
810	73	18	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
811	66	82		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
812	31	271		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
813	66	136	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
814	89	48	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
815	81	152	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	1
816	28	164	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
817	77	235	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	3
818	34	154	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
819	72	288		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	
820	79	52	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
821	74	43	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	7
822	70	145	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
823	32	182	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
824	87	33	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	7
825	59	132	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
826	72	287		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
827	24	176	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
828	68	146	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	1
829	82	46	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
830	75	91		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
831	43	137		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
832	76	86		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
833	28	183	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	5

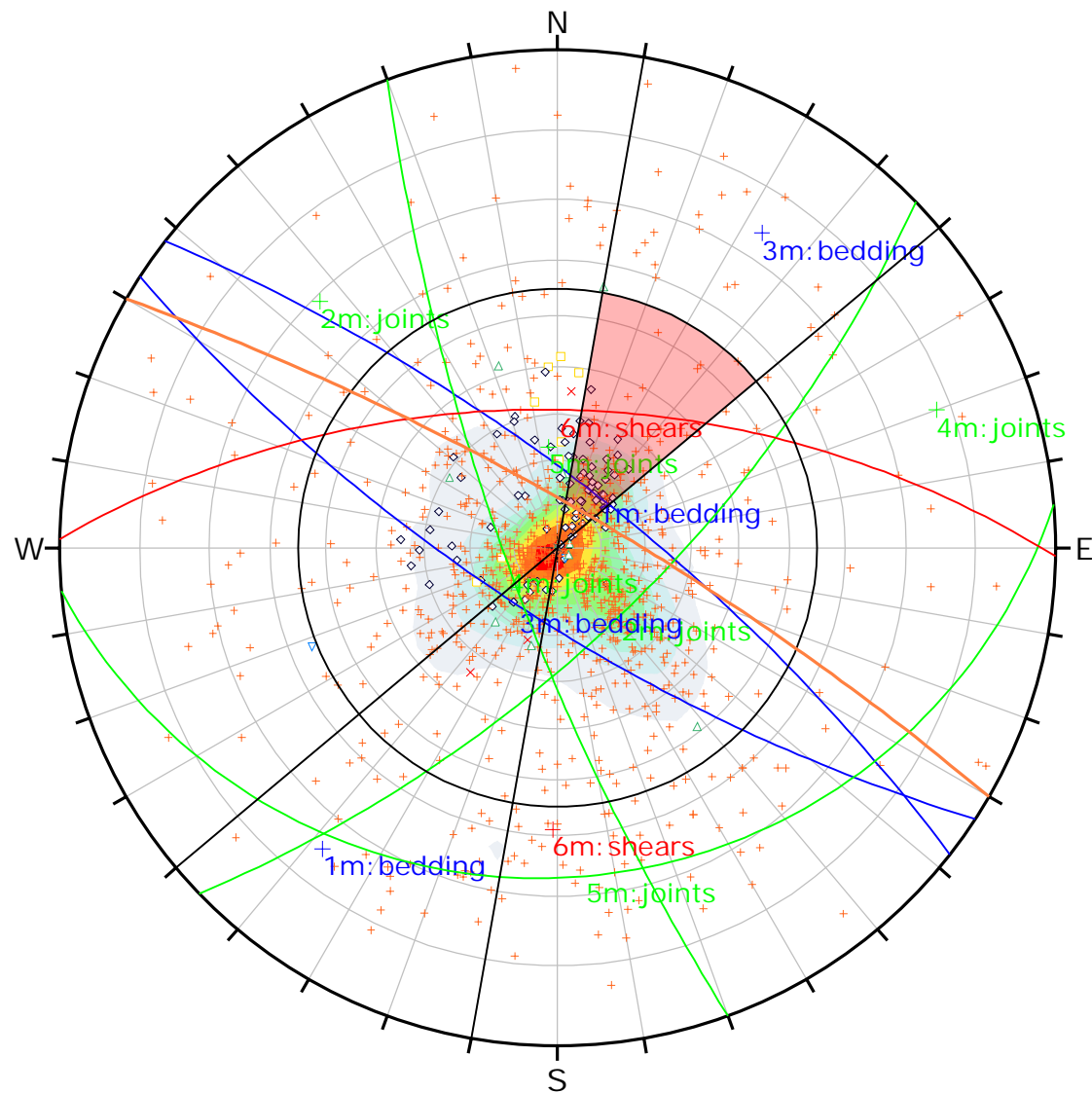
ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
834	72	136	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
835	71	169		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
836	23	170	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	5
837	35	261		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
838	25	186	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
839	82	49	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
840	76	62		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	7
841	67	141	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	1
842	83	49	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	7
843	34	163	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
844	76	80		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
845	76	154	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	32	Locality 1	6-12	1
846	73	48	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
847	24	145	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
848	65	138	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
849	49	261		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
850	81	32	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	8
851	81	210	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	2
852	78	127	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
853	88	13		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	8
854	3	11		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	6
855	33	170	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
856	73	236	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	3
857	78	139	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	1
858	63	161		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
859	69	79		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
860	25	189	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
861	63	120	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
862	58	149	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
863	26	188	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
864	81	264	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	4
865	69	252	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	4
866	52	161		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
867	75	54	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
868	76	51	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
869	84	238	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	3
870	82	43	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	7
871	70	139	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
872	14	150	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
873	83	333		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	
874	78	67		Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
875	77	85		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
876	14	215	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	5
877	22	195	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
878	52	132	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	1
879	59	227	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	3
880	74	100		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	
881	14	158	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
882	71	180		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	2

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
883	78	28	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
884	71	35	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	7
885	84	6		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	8
886	18	212	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
887	62	132	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	1
888	79	3		Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
889	4	142	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
890	71	138	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
891	69	16	6	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
892	81	11		Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
893	56	134	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
894	3	117		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	6
895	32	146	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
896	74	173		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
897	31	298		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	
898	48	139		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
899	72	263	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	4
900	17	207	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	5
901	78	188		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	2
902	80	187		Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	2
903	87	174		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	
904	34	189	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
905	25	179	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
906	16	84		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	6
907	66	243	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	3
908	73	20	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	8
909	78	26	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
910	57	204	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	2
911	14	124	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
912	76	262	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	4
913	24	168	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
914	69	129	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
915	89	7		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	8
916	20	191	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
917	26	33		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	6
918	80	187		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	2
919	22	193	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
920	87	3		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	8
921	68	122	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
922	27	15		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	6
923	83	131	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
924	15	206	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
925	57	15	6	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	8
926	79	12		Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
927	21	5		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	6
928	27	200	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
929	75	130	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
930	88	194		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	2
931	24	194	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
932	83	122	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
933	58	152	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
934	80	135	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
935	14	200	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
936	81	343		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
937	74	18	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	8
938	74	2		Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
939	75	262	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	4
940	28	158	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
941	66	4	6	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
942	13	170	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
943	76	130	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
944	31	194	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	5
945	87	27	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	8
946	77	268	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	4
947	79	16		Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
948	84	296		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
949	62	183		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	2
950	66	258	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	4
951	74	108		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
952	22	196	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	5
953	67	131	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
954	56	278		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
955	14	174	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
956	71	119	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
957	65	17	6	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
958	75	129	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
959	64	185		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	2
960	20	110		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
961	66	42	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	5	Locality 1	6-12	7
962	76	185		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	2
963	85	158		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	4	Locality 1	6-12	
964	68	140	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	1
965	65	33	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	5	Locality 1	6-12	8
966	9	206	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	5
967	57	185		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	2
968	56	300		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	4	Locality 1	6-12	
969	70	23	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	5	Locality 1	6-12	8
970	25	269		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	
971	77	127	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	1
972	81	180		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	2
973	13	292		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	
974	73	29	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	8
975	65	140	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	1
976	57	317		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
977	75	155	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
978	57	294		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
979	66	57		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	7
980	23	17		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	6

ID	Dip	Dip Direction	Set	TYPE	UNIT	BROWN UNIT	CONTIN	LOCATION	DATE	SETID
981	76	189		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	2
982	76	151	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
983	84	27	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	8
984	10	33		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	6
985	82	188		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	2
986	8	0		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	6
987	51	143	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
988	66	174		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
989	23	259		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
990	83	177		Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	
991	57	170		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
992	55	137	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
993	18	208	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
994	84	70	4	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	
995	12	28		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	6
996	66	148	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	1
997	60	148	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	1
998	84	197	3	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	2
999	86	317		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	
1000	68	73		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	
1001	24	165	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	5
1002	48	197		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	
1003	78	146	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	1
1004	62	143	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	1
1005	21	173	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	5
1006	53	342		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	
1007	65	156	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	3	Locality 1	6-12	1
1008	84	162		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv2	2	Locality 1	6-12	
1009	85	21	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
1010	66	174		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
1011	44	148		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
1012	19	189	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
1013	40	297		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
1014	74	29	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
1015	67	296		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
1016	87	14		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	8
1017	38	209		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	
1018	73	28	1	Bedding	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	5	Locality 1	6-12	8
1019	69	143	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	1
1020	59	108		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
1021	65	147	2	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	1
1022	31	188	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5
1023	31	337		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
1024	84	55	1	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	4	Locality 1	6-12	7
1025	61	165		Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	2	Locality 1	6-12	
1026	21	197	5	Joint	Jf3 calc hornfels. Ls. Cgl + Jfv2	Jfv3	3	Locality 1	6-12	5





Symbol	TYPE	Quantity
◇	Bedding	96
×	Cleavage	4
△	Fault	13
+	Joint	903
▽	Plane Type 1	2
□	shear zone	8

Color	Density Concentrations
	0.00 - 1.40
	1.40 - 2.80
	2.80 - 4.20
	4.20 - 5.60
	5.60 - 7.00
	7.00 - 8.40
	8.40 - 9.80
	9.80 - 11.20
	11.20 - 12.60
	12.60 - 14.00

Contour Data	Dip Vectors
Maximum Density	13.10%
Contour Distribution	Fisher
Counting Circle Size	1.0%

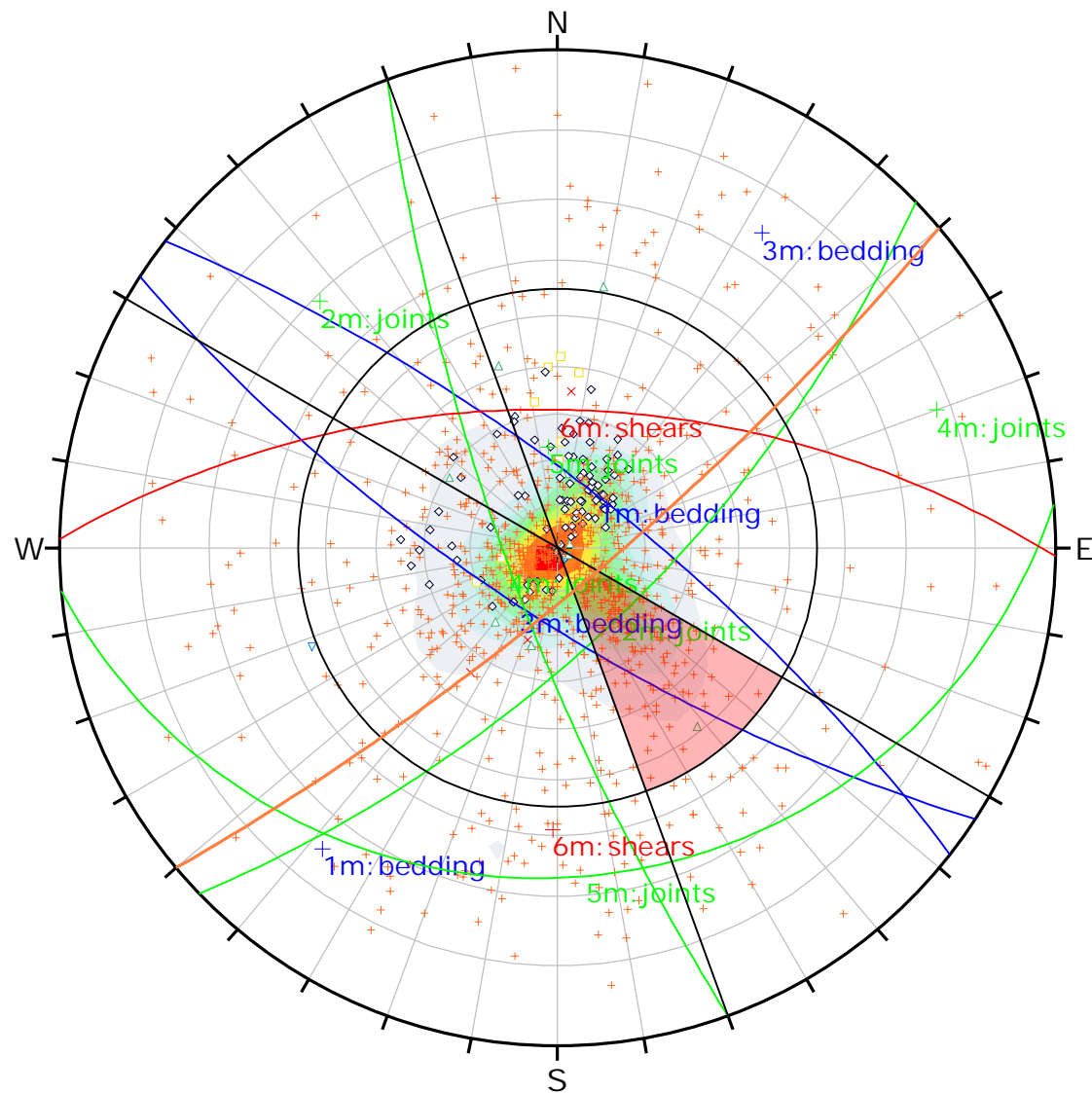
Kinematic Analysis	Planar Sliding		
Slope Dip	80		
Slope Dip Direction	30		
Friction Angle	35°		
Lateral Limits	20°		
	Critical	Total	%
Planar Sliding (All)	88	1026	8.58%
Planar Sliding (Set 1: bedding)	66	114	57.89%
Planar Sliding (Set 6: shears)	9	34	26.47%

Plot Mode	Dip Vectors
Vector Count	1026 (1026 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)		
Drawn By	Terracon	Author	JMc
File Name	planar Cemex Jfv3 area west of blk.dips7	Date	7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	96
×	Cleavage	4
△	Fault	13
+	Joint	903
▽	Plane Type 1	2
□	shear zone	8

Color	Density Concentrations
	0.00 - 1.40
	1.40 - 2.80
	2.80 - 4.20
	4.20 - 5.60
	5.60 - 7.00
	7.00 - 8.40
	8.40 - 9.80
	9.80 - 11.20
	11.20 - 12.60
	12.60 - 14.00

Contour Data	Dip Vectors
Maximum Density	13.10%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Planar Sliding			
Slope Dip	80			
Slope Dip Direction	140			
Friction Angle	35°			
Lateral Limits	20°			
		Critical	Total	%
Planar Sliding (All)		148	1026	14.42%
Planar Sliding (Set 2: joints)		124	150	82.67%
Planar Sliding (Set 5: joints)		1	88	1.14%

Plot Mode	Dip Vectors
Vector Count	1026 (1026 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)

Drawn By

Terracon

Author

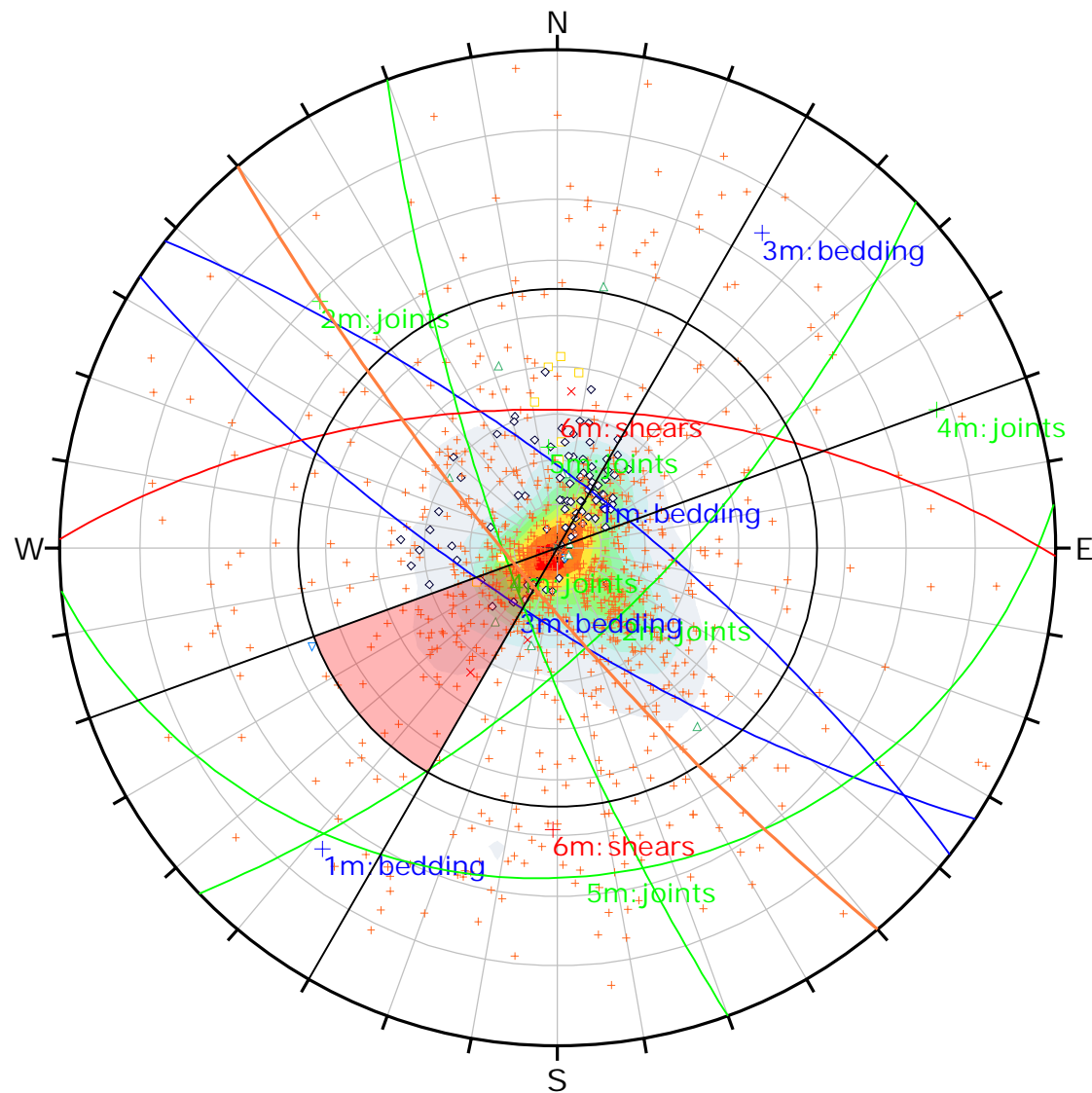
JMc

File Name

planar Cemex Jfv3 area west of blk.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	96
×	Cleavage	4
△	Fault	13
+	Joint	903
▽	Plane Type 1	2
□	shear zone	8

Color	Density Concentrations
	0.00 - 1.40
	1.40 - 2.80
	2.80 - 4.20
	4.20 - 5.60
	5.60 - 7.00
	7.00 - 8.40
	8.40 - 9.80
	9.80 - 11.20
	11.20 - 12.60
	12.60 - 14.00

Contour Data	Dip Vectors
Maximum Density	13.10%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis		Planar Sliding		
Slope Dip		80		
Slope Dip Direction		230		
Friction Angle		35°		
Lateral Limits		20°		
		Critical	Total	%
Planar Sliding (All)		92	1026	8.97%
Planar Sliding (Set 3: bedding)		36	93	38.71%
Planar Sliding (Set 4: joints)		30	93	32.26%

Plot Mode	Dip Vectors
Vector Count	1026 (1026 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)

Drawn By

Terracon

Author

JMc

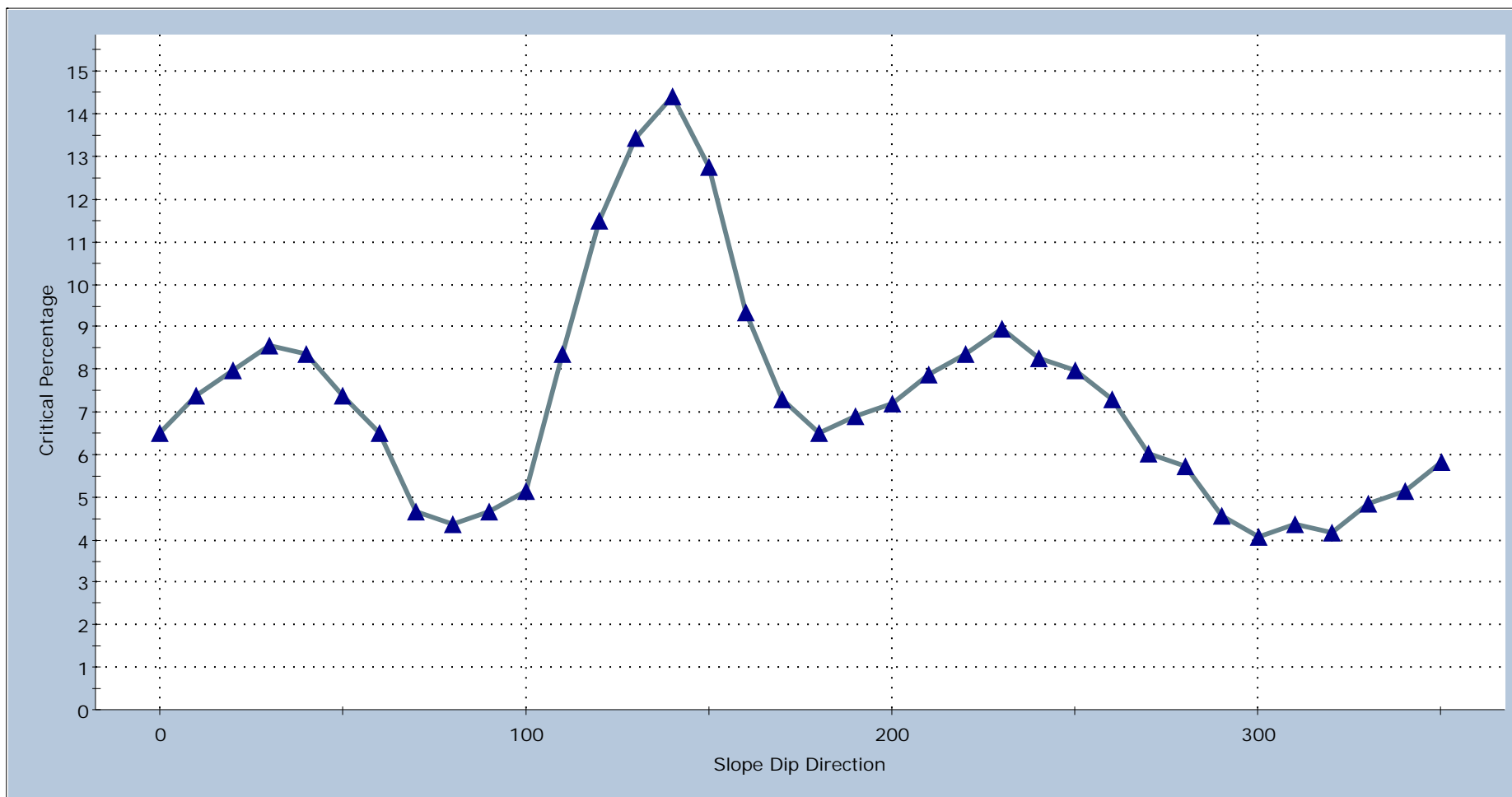
File Name

planar Cemex Jfv3 area west of blk.dips7

Date

7/2/2020

## Planar Sliding: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

# Terracon

Project

Cemex Wht/Blk Mtn

Analysis Description

Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)

Drawn By

Terracon

Author

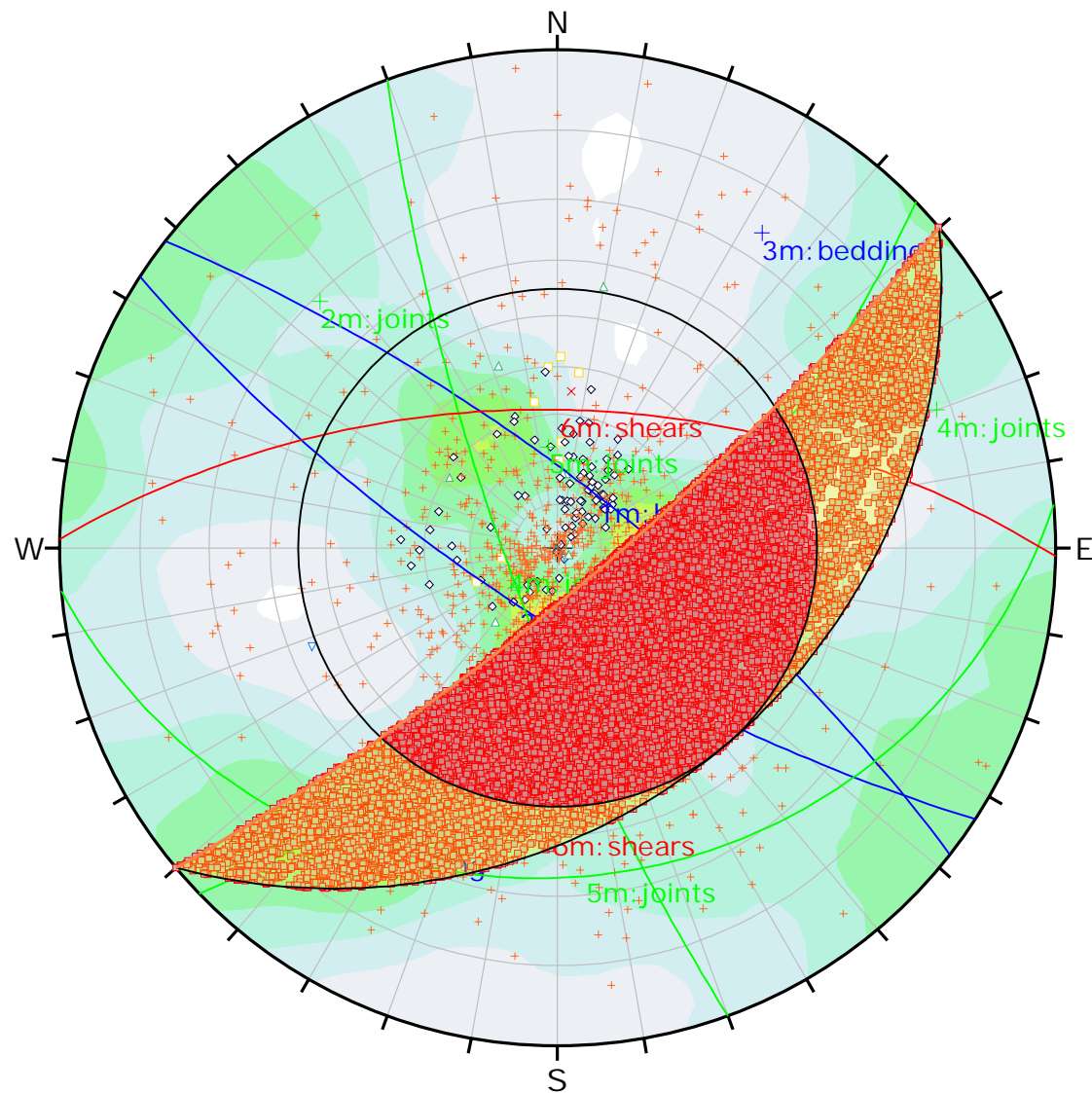
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File Name

planar Cemex Jfv3 area west of blk.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	96
×	Cleavage	4
△	Fault	13
+	Joint	903
▽	Plane Type 1	2
□	shear zone	8
Symbol	Feature	
■	Critical Intersection	

Color	Density Concentrations
	0.00 - 0.30
	0.30 - 0.60
	0.60 - 0.90
	0.90 - 1.20
	1.20 - 1.50
	1.50 - 1.80
	1.80 - 2.10
	2.10 - 2.40
	2.40 - 2.70
	2.70 - 3.00

Contour Data	Intersections
Maximum Density	2.69%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding		
Slope Dip	80		
Slope Dip Direction	140		
Friction Angle	35°		
	Critical	Total	%
Wedge Sliding	171591	525797	32.63%

Plot Mode	Dip Vectors
Vector Count	1026 (1026 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	525797
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)

Drawn By

Terracon

Author

JMc

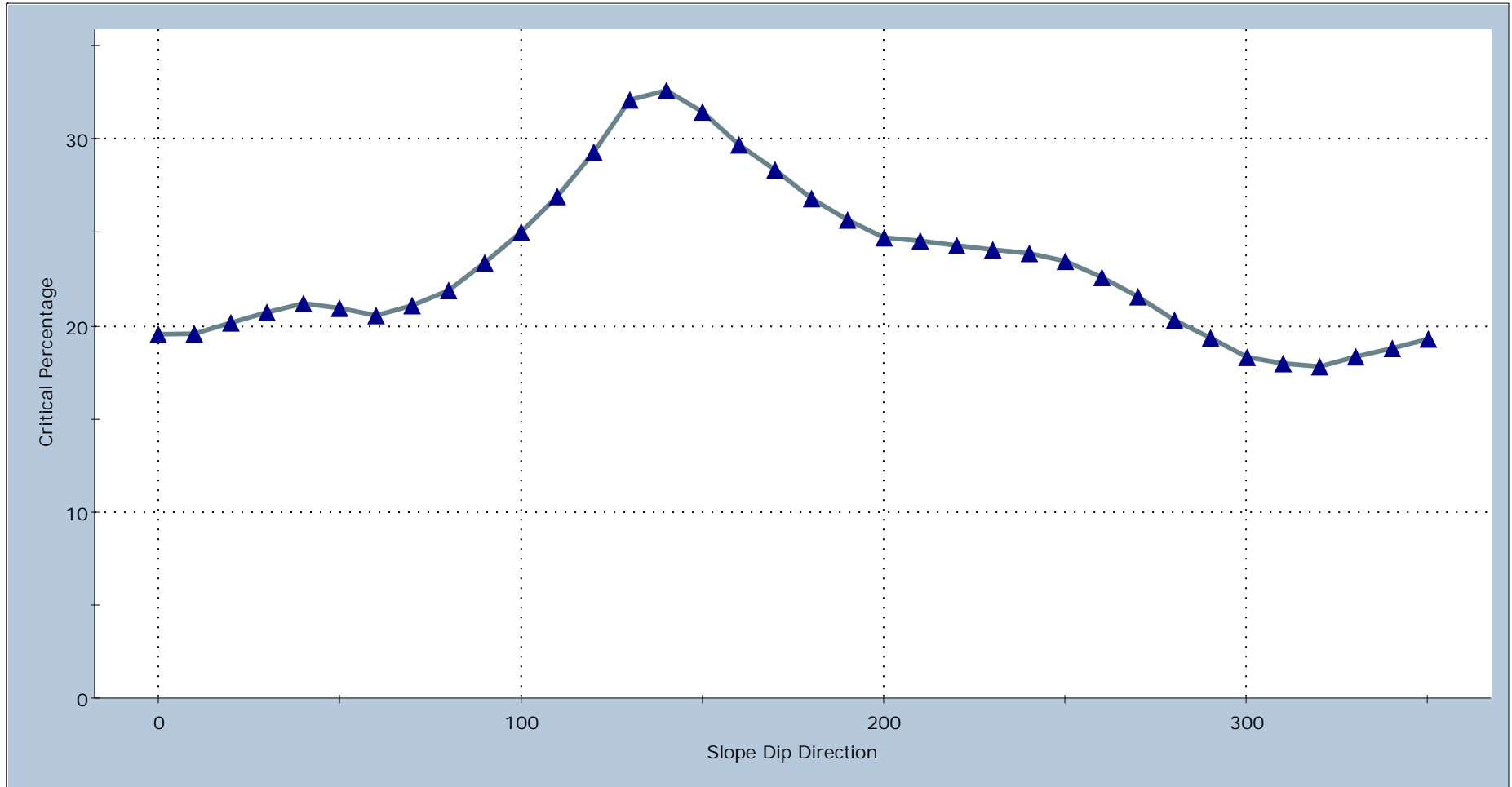
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wedge Cemex Jfv3 area west of blk.dips7

Date

7/2/2020

## Wedge Sliding: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

# Terracon

*Project*

Cemex Wht/Blk Mtn

*Analysis Description*

Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)

*Drawn By*

Terracon

*Author*

JMc

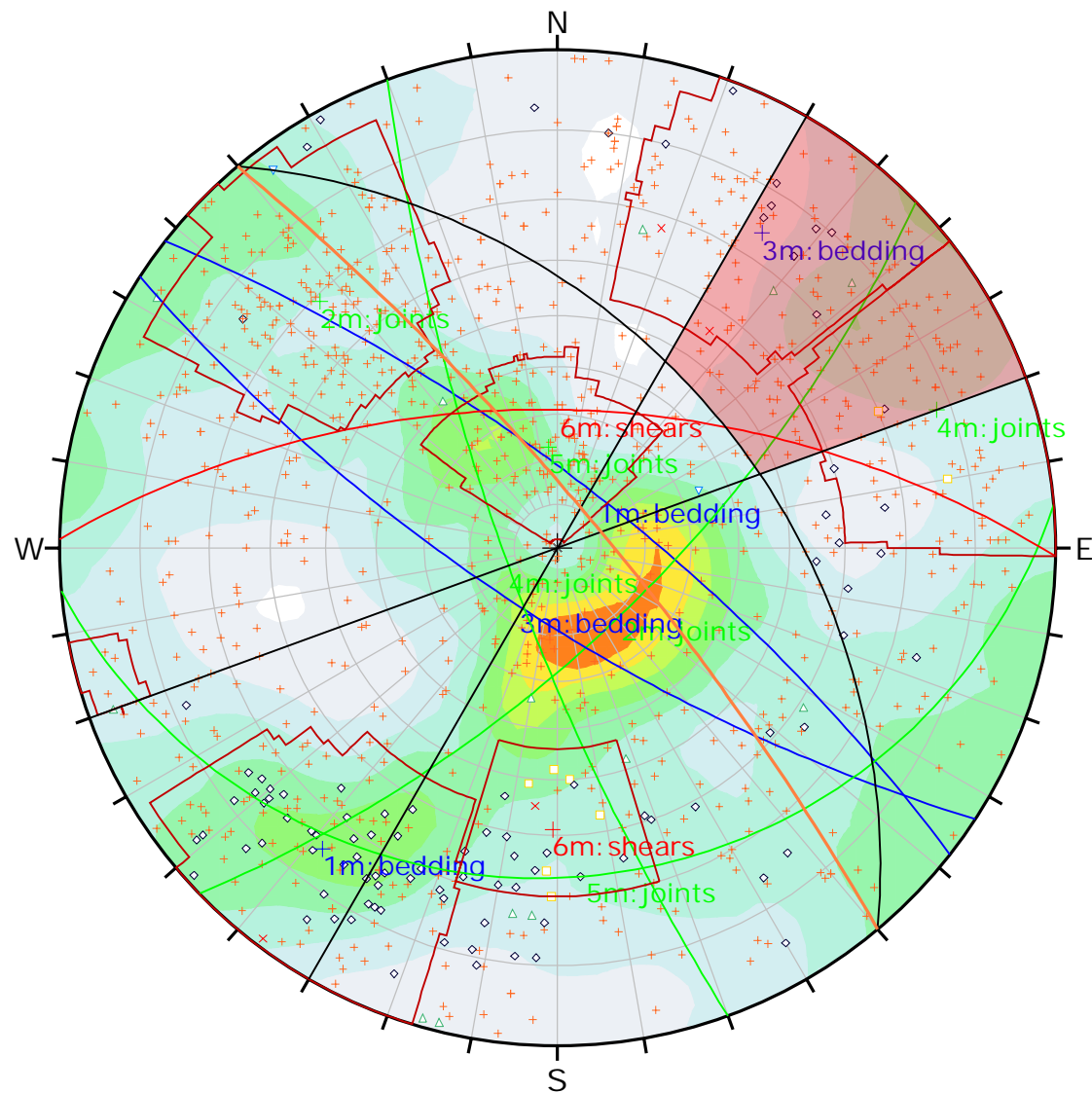
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wedge Cemex Jfv3 area west of blk.dips7

*Date*

7/2/2020





Symbol	TYPE	Quantity
◇	Bedding	96
×	Cleavage	4
△	Fault	13
+	Joint	903
▽	Plane Type 1	2
□	shear zone	8

Color	Density Concentrations
	0.00 - 0.30
	0.30 - 0.60
	0.60 - 0.90
	0.90 - 1.20
	1.20 - 1.50
	1.50 - 1.80
	1.80 - 2.10
	2.10 - 2.40
	2.40 - 2.70
	2.70 - 3.00

Contour Data	Intersections
Maximum Density	2.69%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Flexural Toppling		
Slope Dip	80		
Slope Dip Direction	50		
Friction Angle	35°		
Lateral Limits	20°		
	Critical	Total	%
Flexural Toppling (All)	126	1026	12.28%
Flexural Toppling (Set 3: bedding)	57	93	61.29%
Flexural Toppling (Set 4: joints)	49	93	52.69%

Plot Mode	Pole Vectors
Vector Count	1026 (1026 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project

Cemex Wht/Blk Mtn

Analysis Description

Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)

Drawn By

Terracon

Author

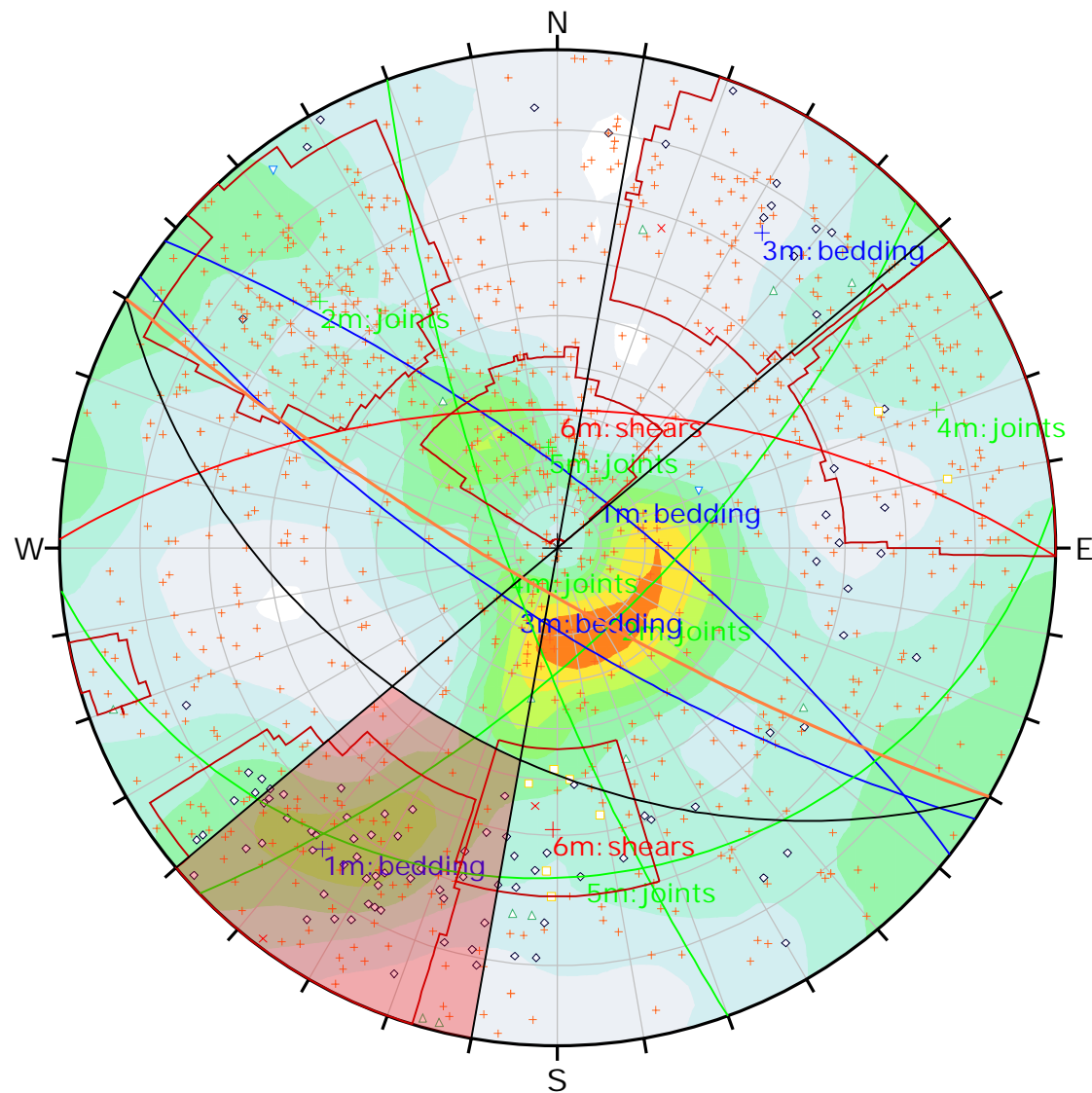
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File Name

topleft Cemex Jfv3 area west of blk.dips7

Date

7/2/2020



Symbol	TYPE	Quantity
◇	Bedding	96
×	Cleavage	4
△	Fault	13
+	Joint	903
▽	Plane Type 1	2
□	shear zone	8

Color	Density Concentrations
	0.00 - 0.30
	0.30 - 0.60
	0.60 - 0.90
	0.90 - 1.20
	1.20 - 1.50
	1.50 - 1.80
	1.80 - 2.10
	2.10 - 2.40
	2.40 - 2.70
	2.70 - 3.00

Contour Data	Intersections
Maximum Density	2.69%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis		Flexural Toppling		
Slope Dip		80		
Slope Dip Direction		210		
Friction Angle		35°		
Lateral Limits		20°		
		Critical	Total	%
Flexural Toppling (All)		119	1026	11.60%
Flexural Toppling (Set 1: bedding)		94	114	82.46%
Flexural Toppling (Set 6: shears)		9	34	26.47%

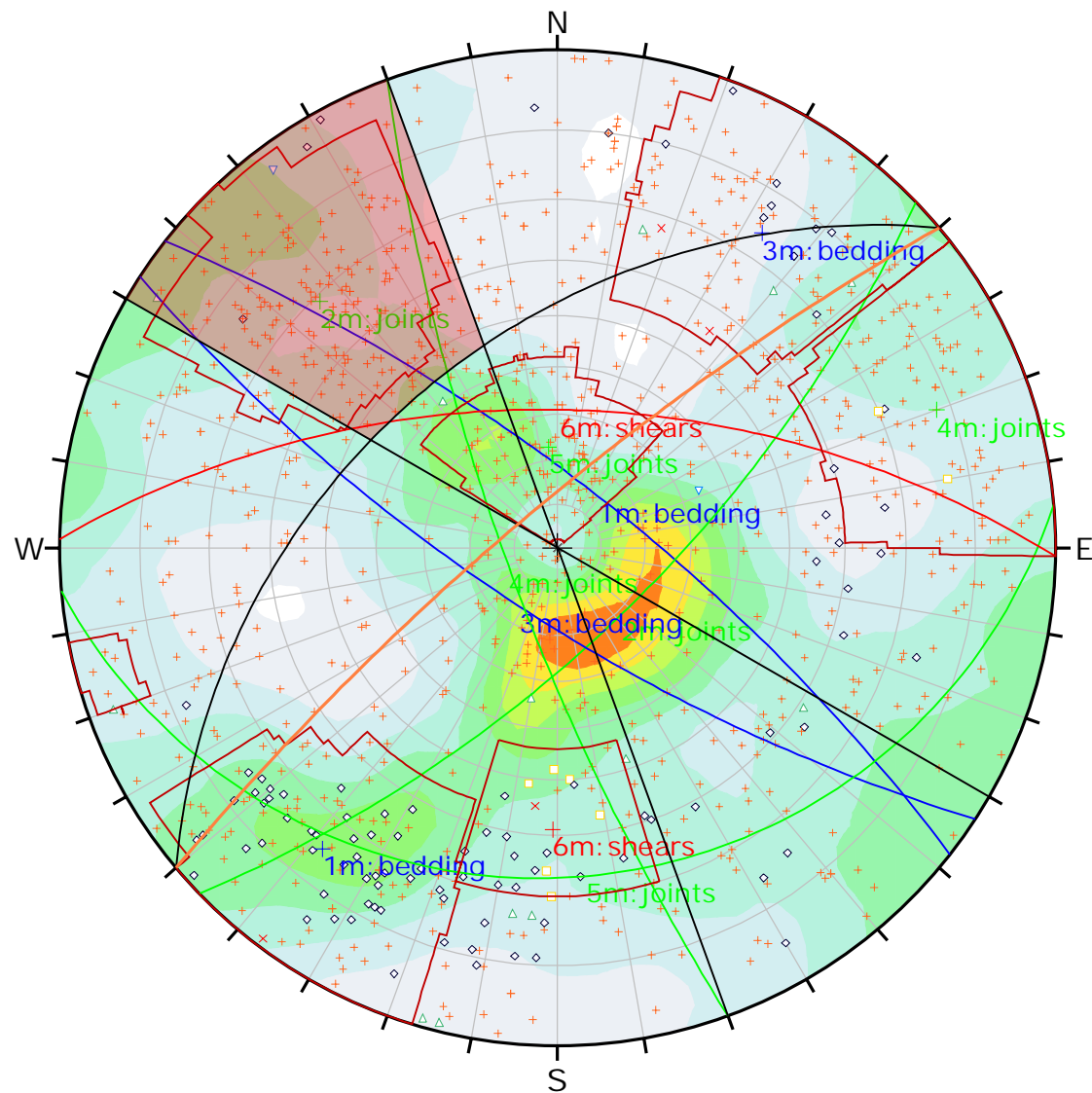
Plot Mode	Pole Vectors
Vector Count	1026 (1026 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

DIPS 7.014

Project	Cemex Wht/Blk Mtn		
Analysis Description	Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)		
Drawn By	Terracon	Author	JMc
File Name	topple Cemex Jfv3 area west of blk.dips7	Date	7/2/2020





Symbol	TYPE	Quantity
◇	Bedding	96
×	Cleavage	4
△	Fault	13
+	Joint	903
▽	Plane Type 1	2
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Color	Density Concentrations
	0.00 - 0.30
	0.30 - 0.60
	0.60 - 0.90
	0.90 - 1.20
	1.20 - 1.50
	1.50 - 1.80
	1.80 - 2.10
	2.10 - 2.40
	2.40 - 2.70
	2.70 - 3.00

Contour Data	Intersections
Maximum Density	2.69%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Flexural Toppling
Slope Dip	80
Slope Dip Direction	320
Friction Angle	35°
Lateral Limits	20°

	Critical	Total	%
Flexural Toppling (All)	165	1026	16.08%
Flexural Toppling (Set 2: joints)	143	150	95.33%

Plot Mode	Pole Vectors
Vector Count	1026 (1026 Entries)
Hemisphere	Lower
Projection	Equal Angle

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)

Drawn By

Terracon

Author

JMc

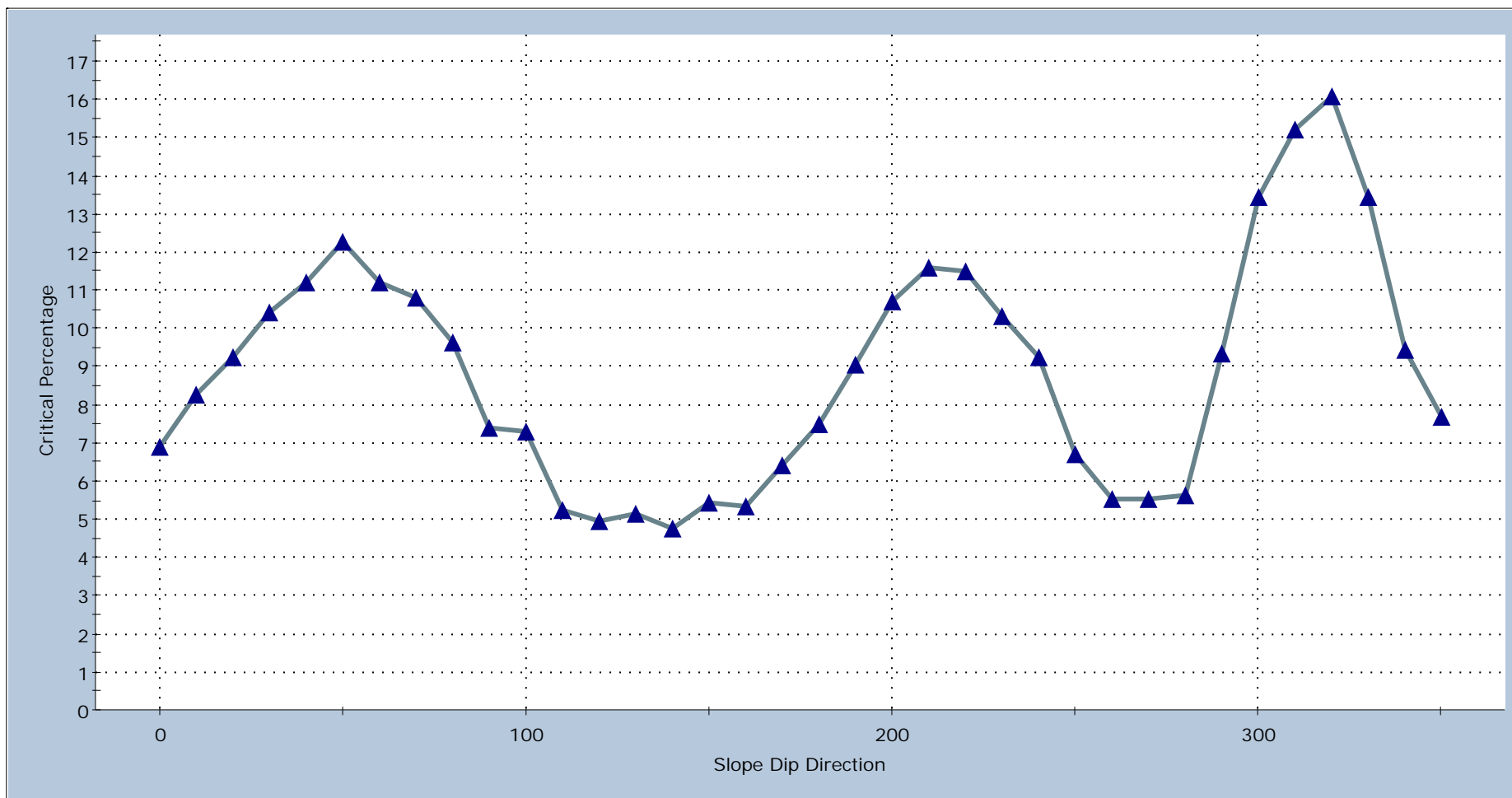
File Name

topleft Cemex Jfv3 area west of blk.dips7

Date

7/2/2020

## Flexural Toppling: Critical Percentage vs. Slope Dip Direction



Mean Values

Slope Dip = 80

Slope Dip Direction = 0

Friction Angle = 35

Lateral Limit = 20

**Terracon**

Project

Cemex Wht/Blk Mtn

Analysis Description

Jfv3 Unit (Area 6-01 L4+6-05 L1+ 6-11 L1 + 6-12 L1)

Drawn By

Terracon

Author

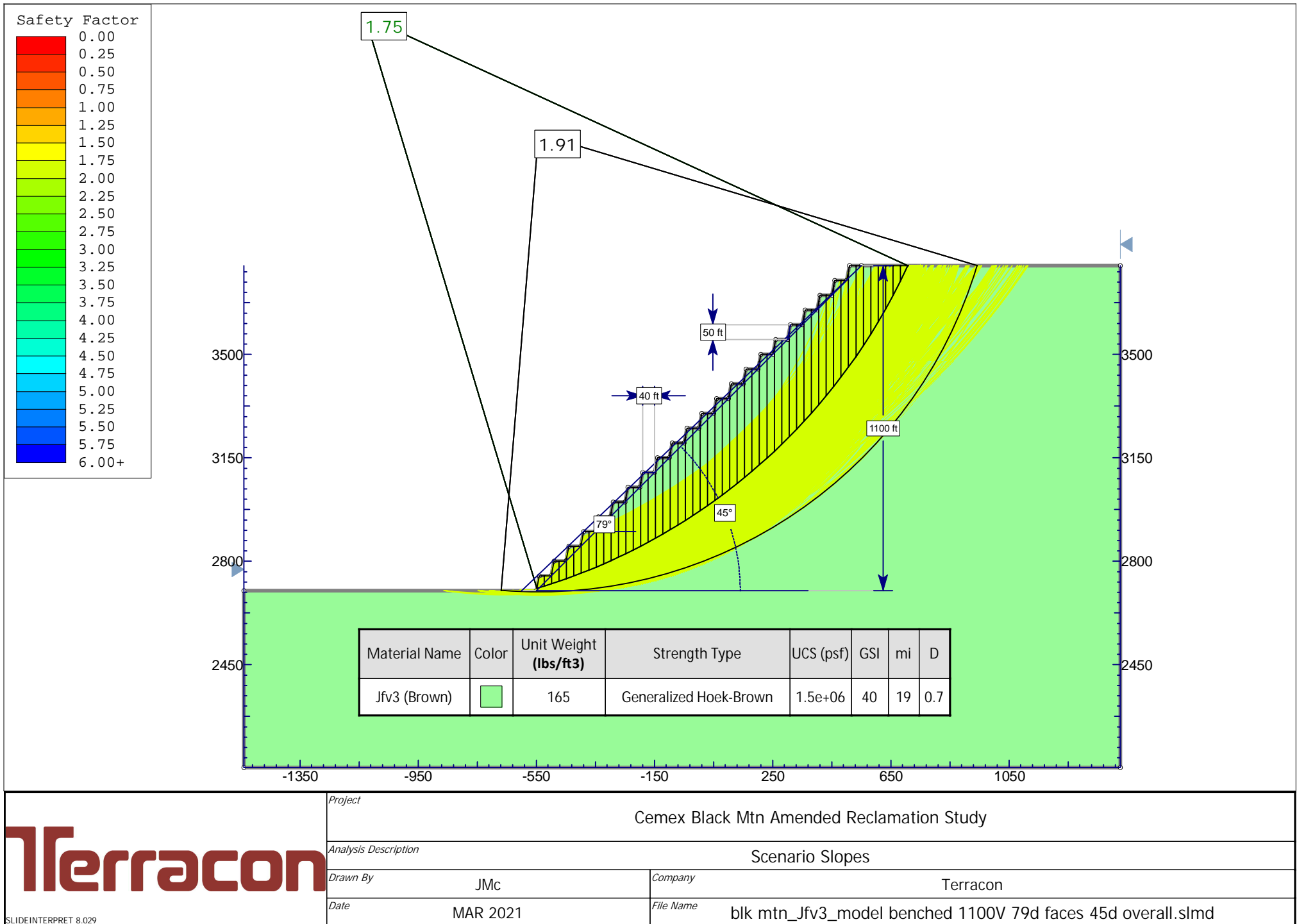
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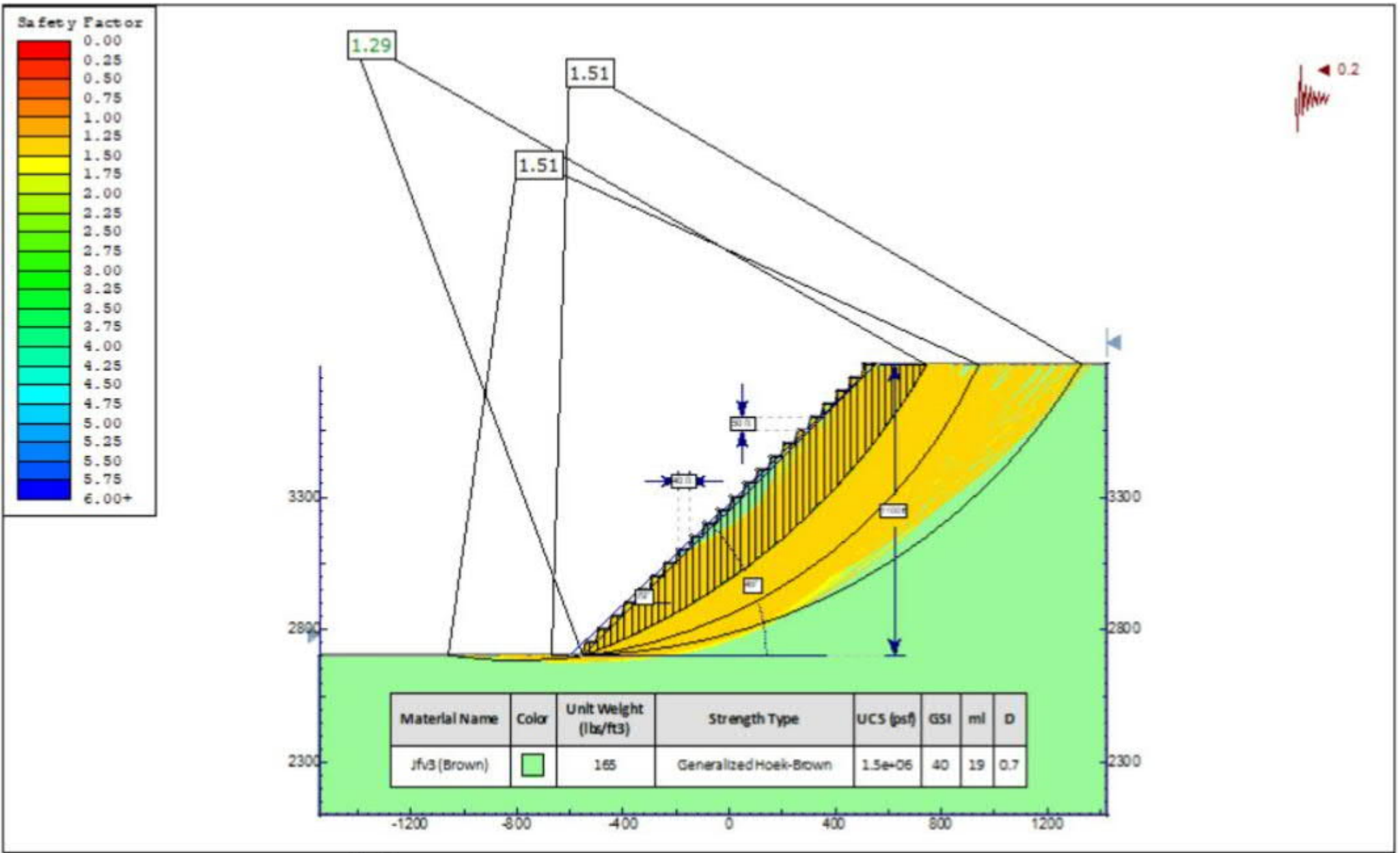
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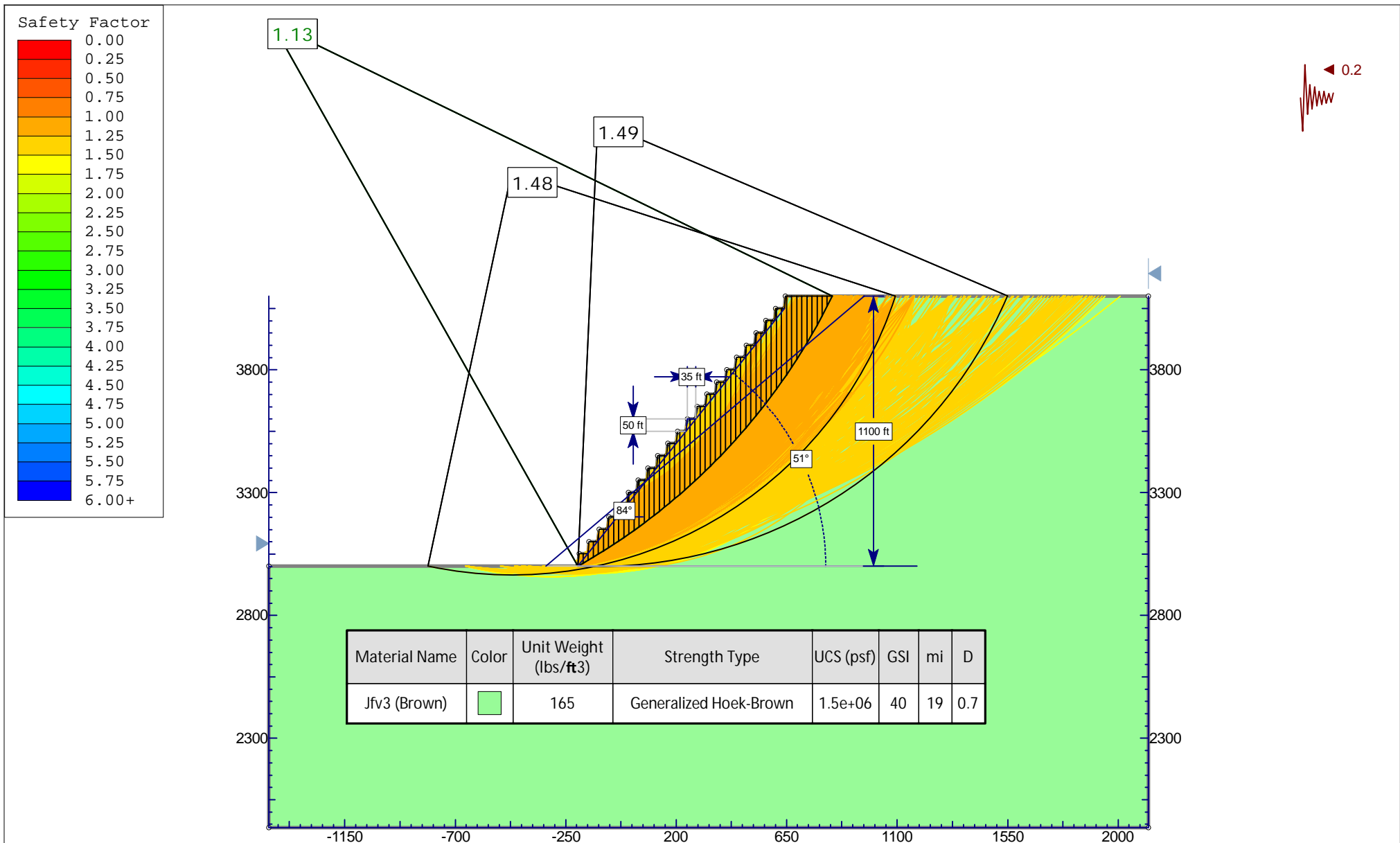
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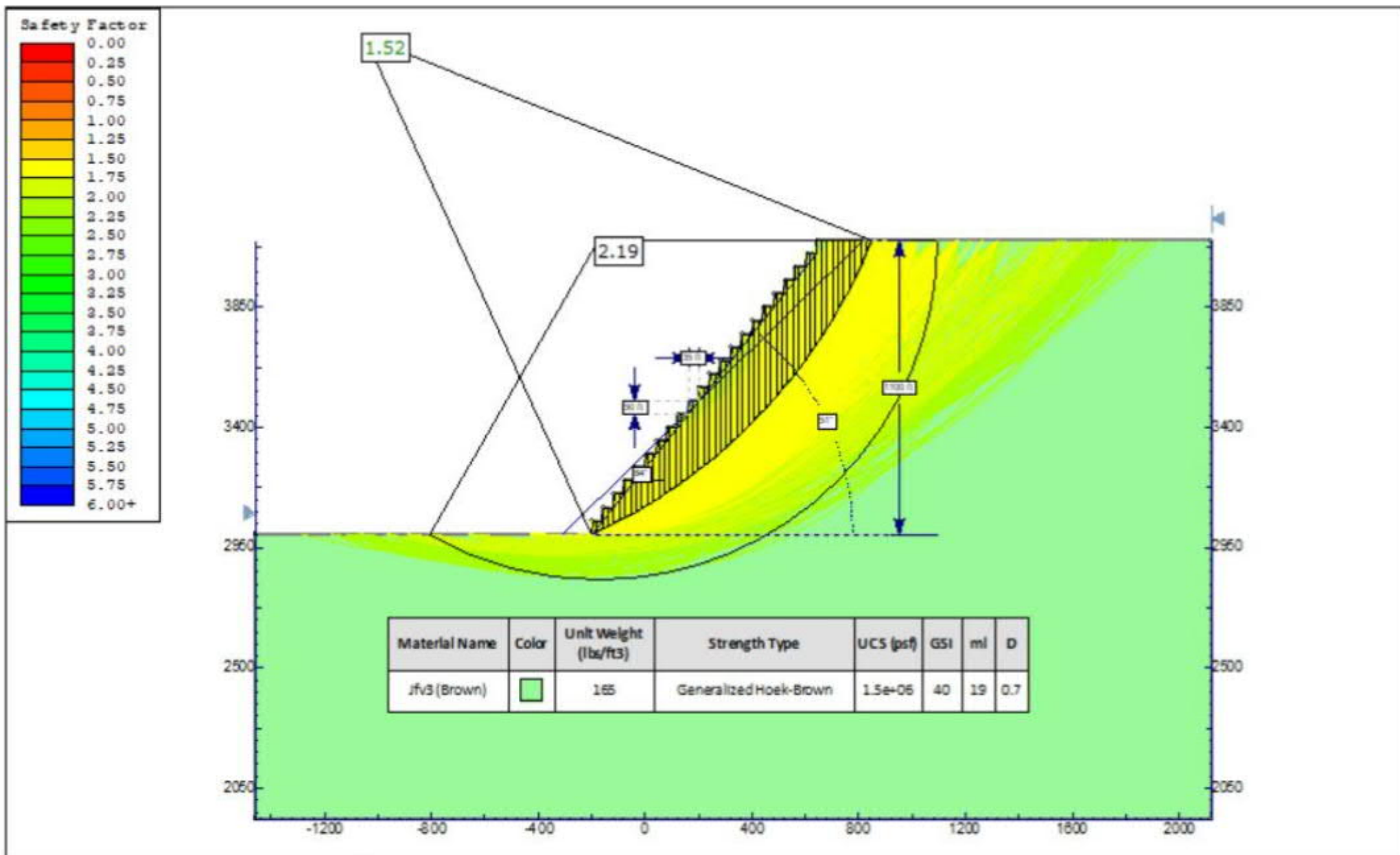





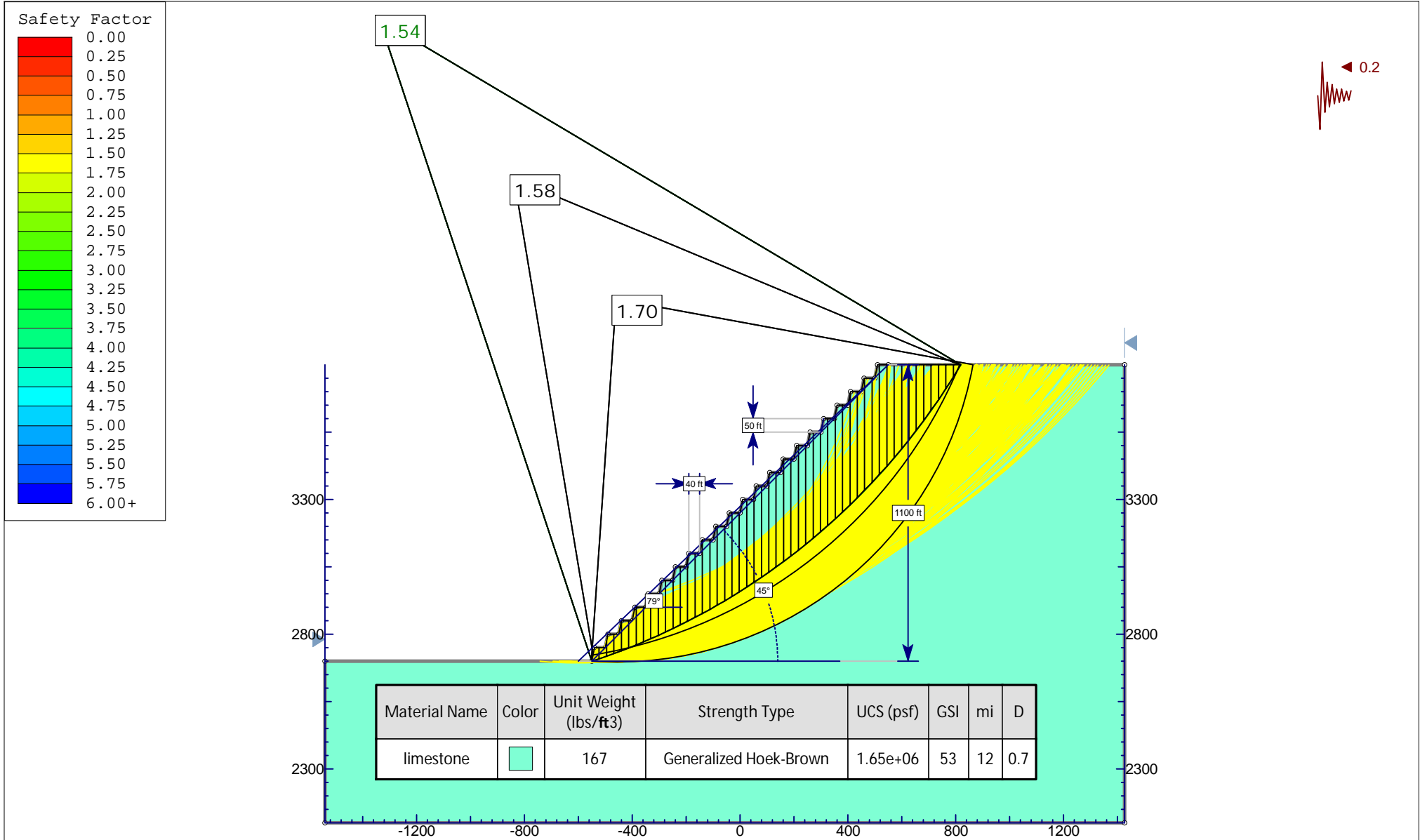
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	Analysis Description		Scenario Slopes	
	Drawn By	JMc	Company	Terracon
	Date	MAR 2021	File Name	blk mtn_jfv3_model benched 1100V 79d faces 45d overall.slm



	Project		Cemex Black Mtn Amended Reclamation Study	
	Analysis Description		Scenario Slopes	
	Drawn By	JMc	Company	Terracon
	Date	MAR 2021	File Name	blk mtn_Jfv3_model benched 1100V 50vx40h_5 back 51d overall.slm

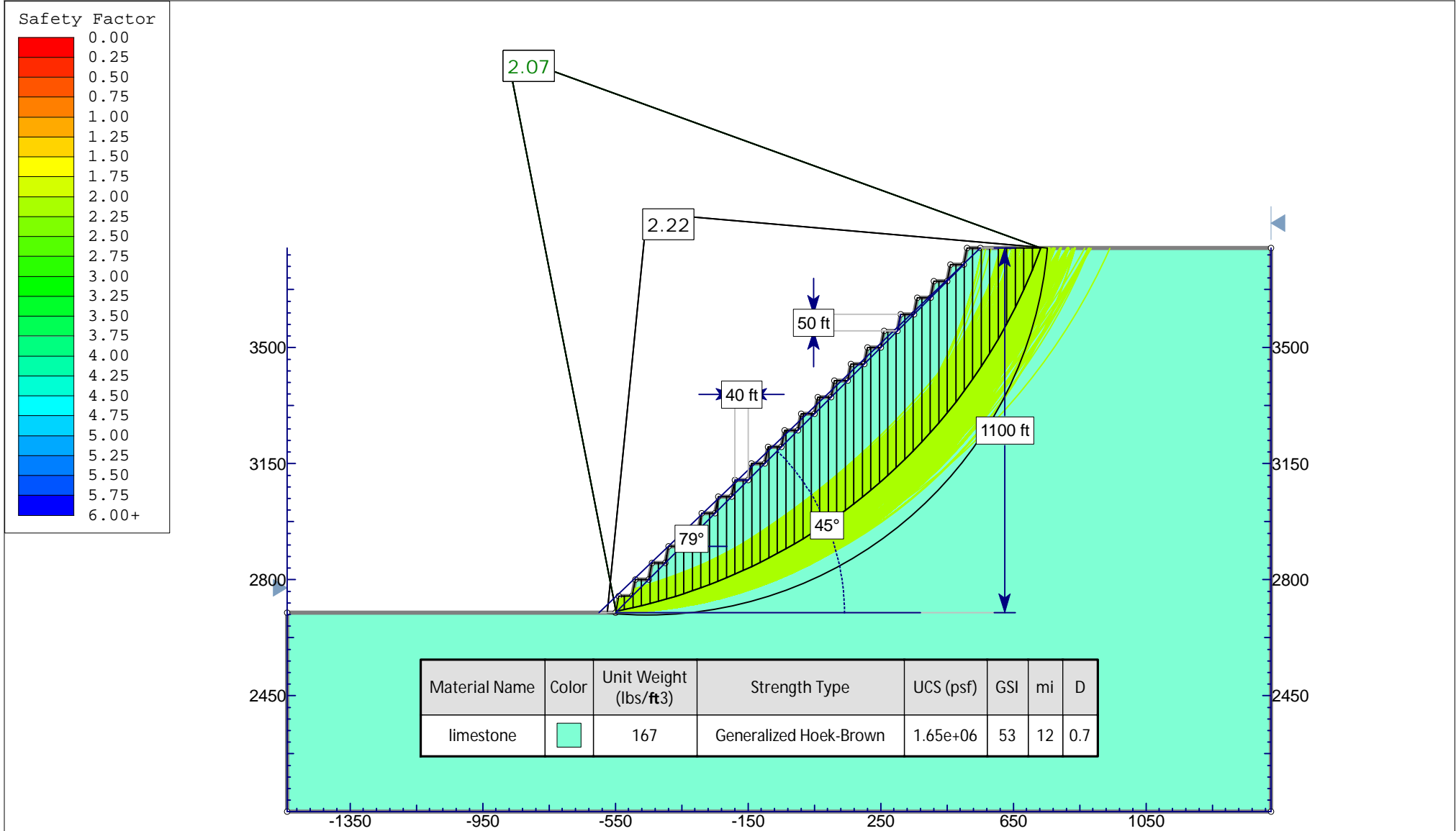


	Project		Cemex Black Mtn Amended Redamation Study	
	Analysis Description		Scenario Slopes	
	Drawn By	JMc	Company	Terracon
	Date	MAR 2021	File Name	blk mtn_Jfv3 1100V 50vx40h_5 back 51d overall.slm



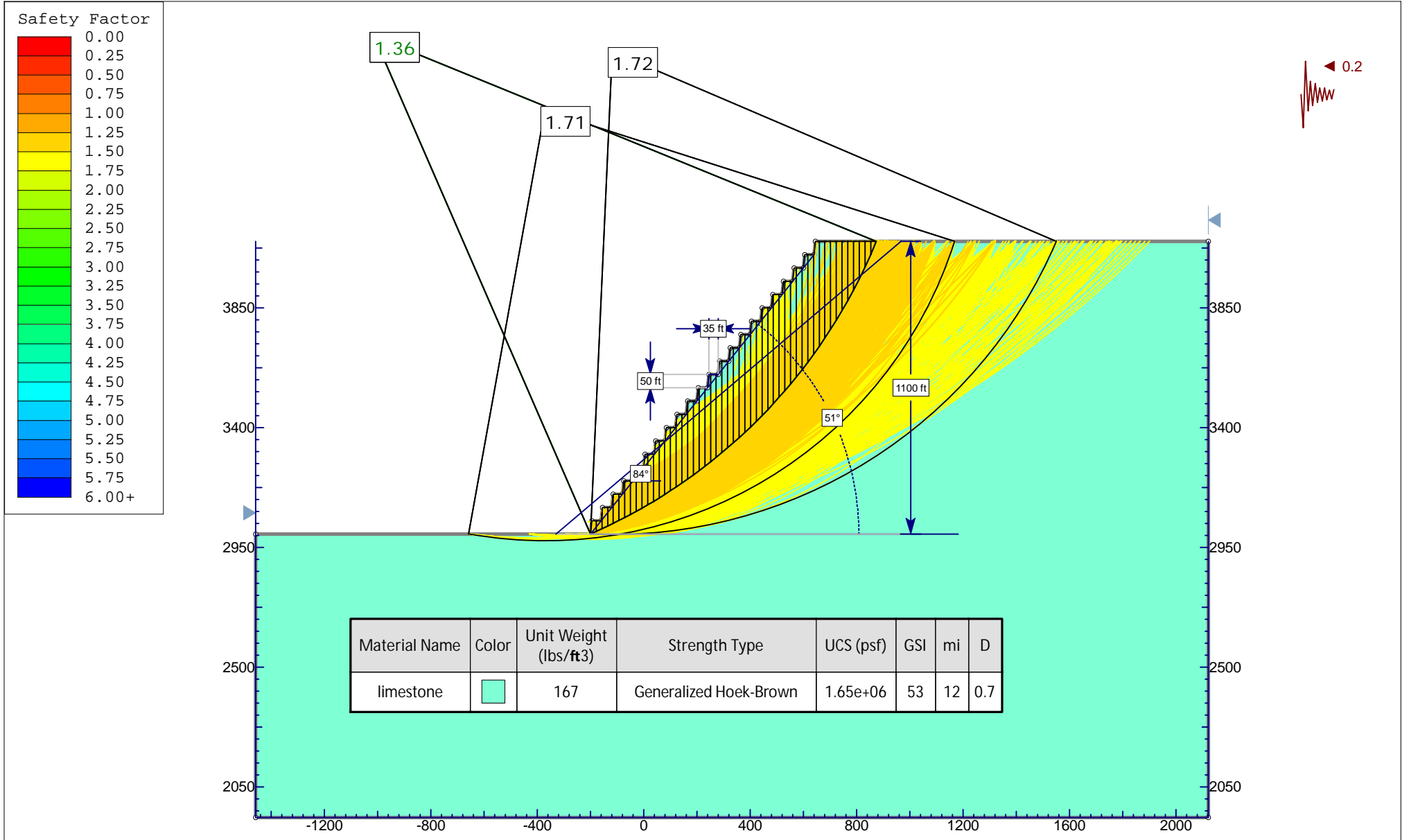
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	Analysis Description		Scenario Slopes	
	Drawn By	JMc	Company	Terracon
	Date	MAR 2021	File Name	blk mtn_limestone_model benched 1100V 79d faces 45d overall.slmd





# Terracon

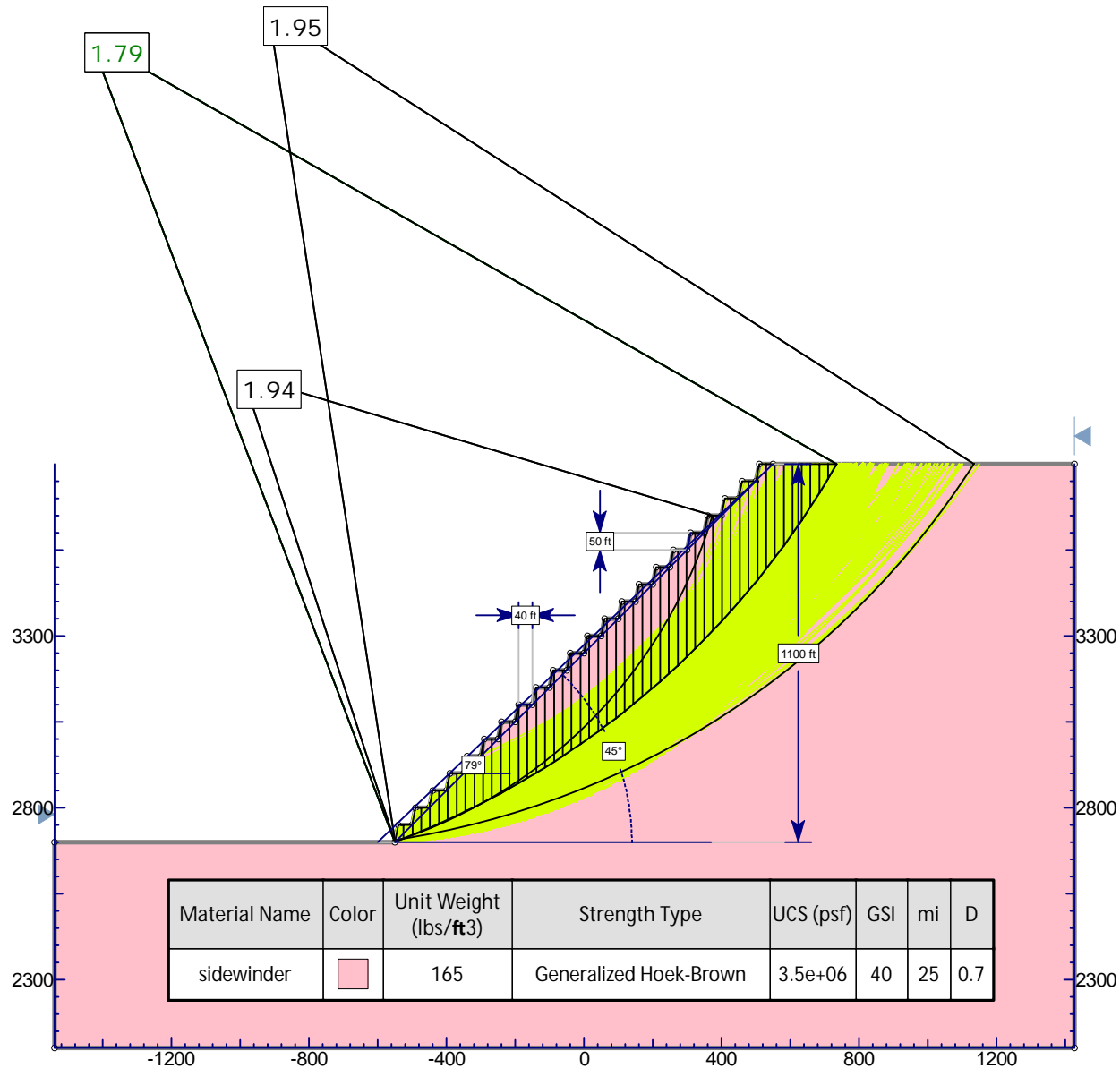
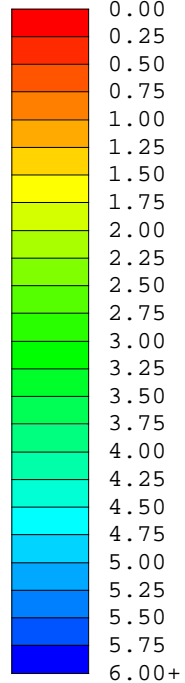
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Analysis Description		Scenario Slopes	
Drawn By	JMc	Company	Terracon
Date	MAR 2021	File Name	blk mtn_limestone_model benched 1100V 79d faces 45d overall.slmd



<div>Terracon</div> <div>SLIDEINTERPRET 8.029</div>	Project		Cemex Black Mtn Amended Reclamation Study	
	Analysis Description		Scenario Slopes	
	Drawn By	JMc	Company	Terracon
	Date	MAR 2021	File Name	blk mtn_limestone_model benched 1100V 50vx40h_5 back 51d overall.slm



# Safety Factor



# Terracon

Project

Cemex Black Mtn Amended Reclamation Study

Analysis Description

Scenario Slopes

Drawn By

JMc

Company

Terracon

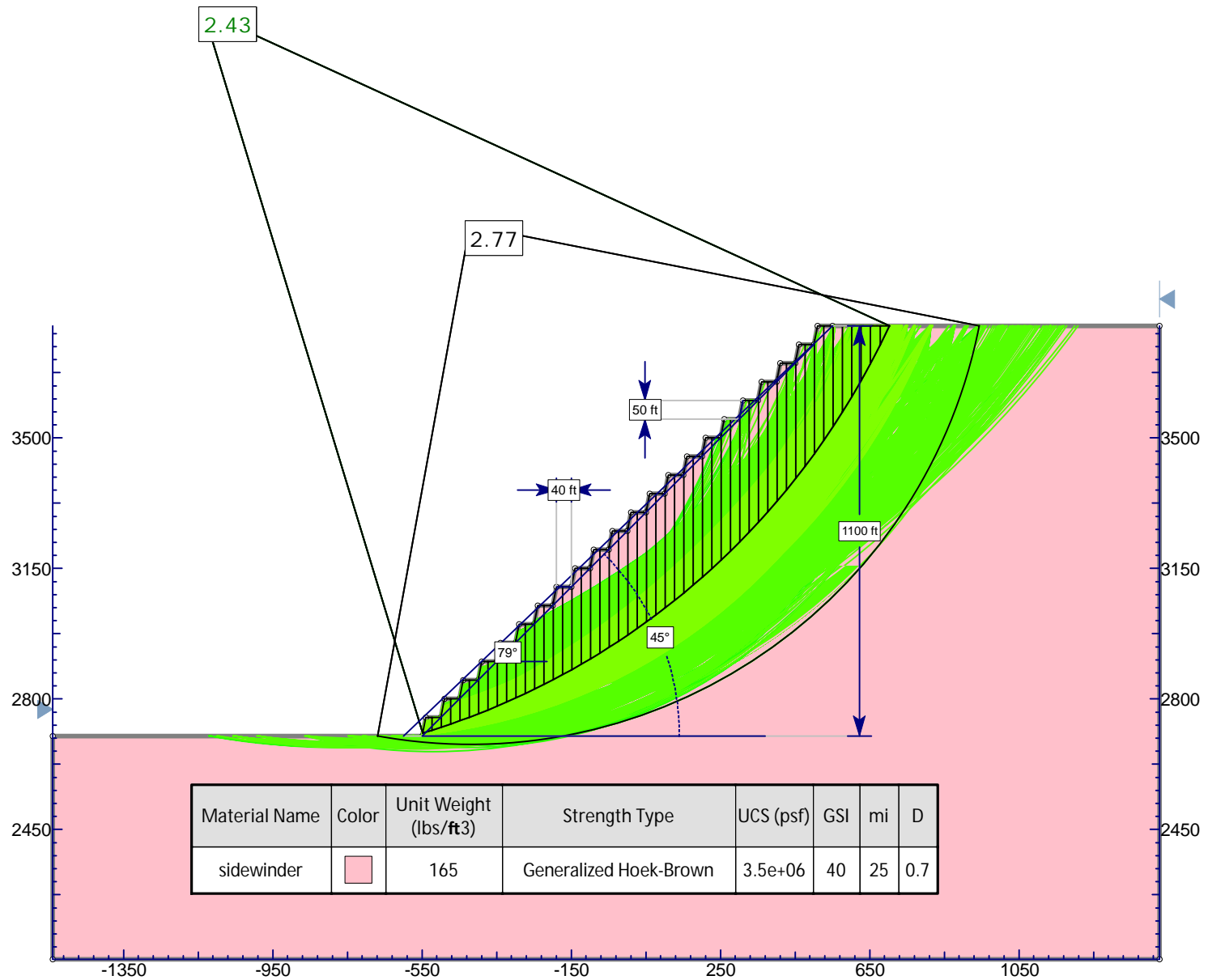
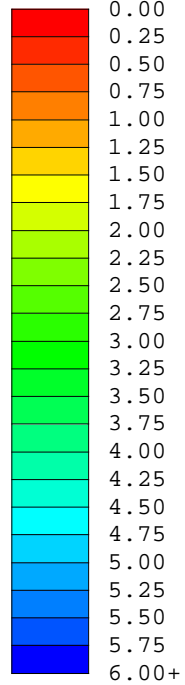
Date


MAR 2021

File Name

blk mtn\_sidewinder\_model benched 1100V 79d faces 45d overall.slm

# Safety Factor



Material Name	Color	Unit Weight (lbs/ft <sup>3</sup> )	Strength Type	UCS (psf)	GSI	mi	D
sidewinder		165	Generalized Hoek-Brown	3.5e+06	40	25	0.7

**Terracon**

Project

Cemex Black Mtn Amended Reclamation Study

Analysis Description

Scenario Slopes

Drawn By

JMc

Company

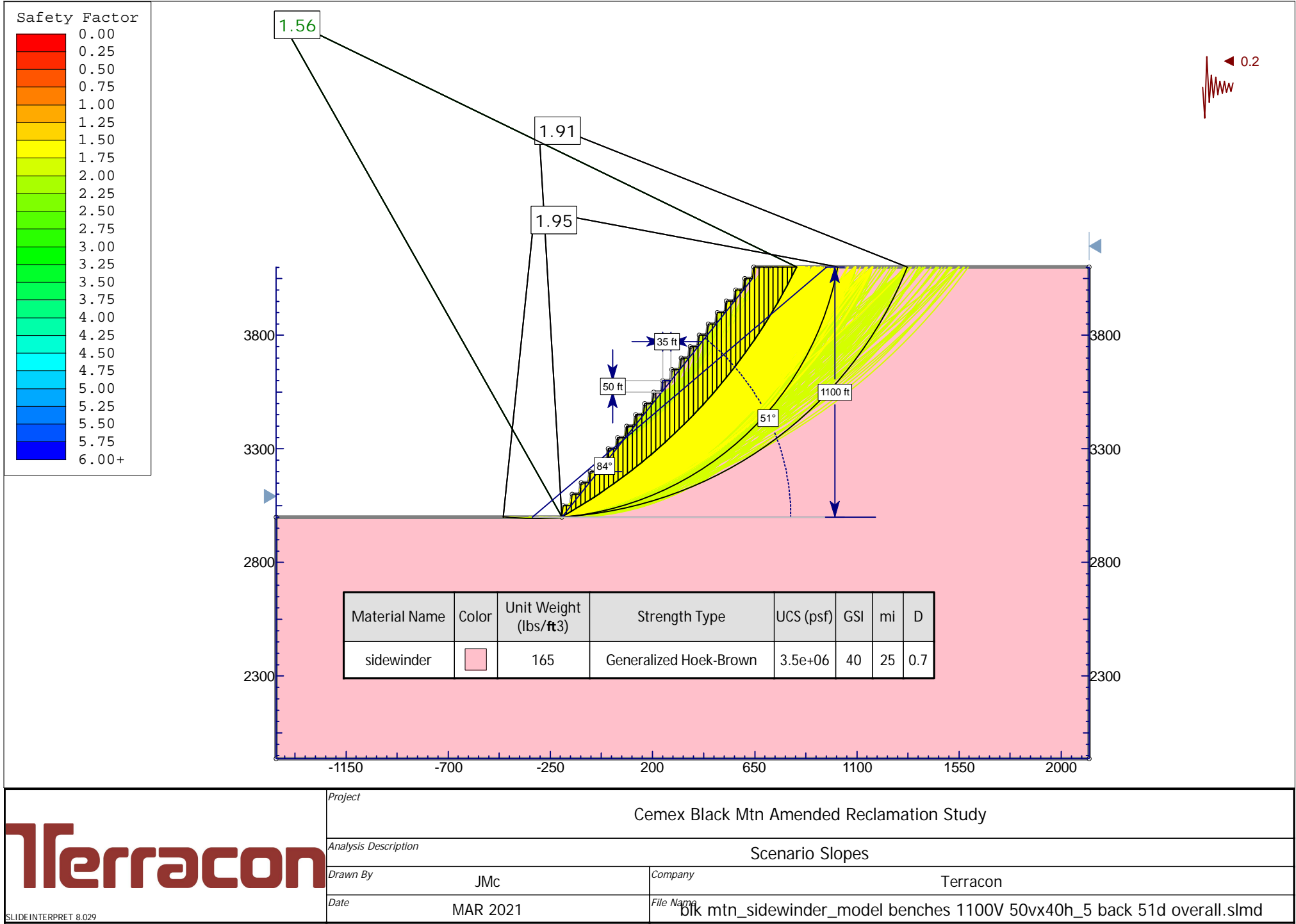
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Date

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File Name

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Terracon

SLIDEINTERPRET 8.029

Project

Cemex Black Mtn Amended Reclamation Study

Analysis Description

Scenario Slopes

Drawn By

JMc

Company

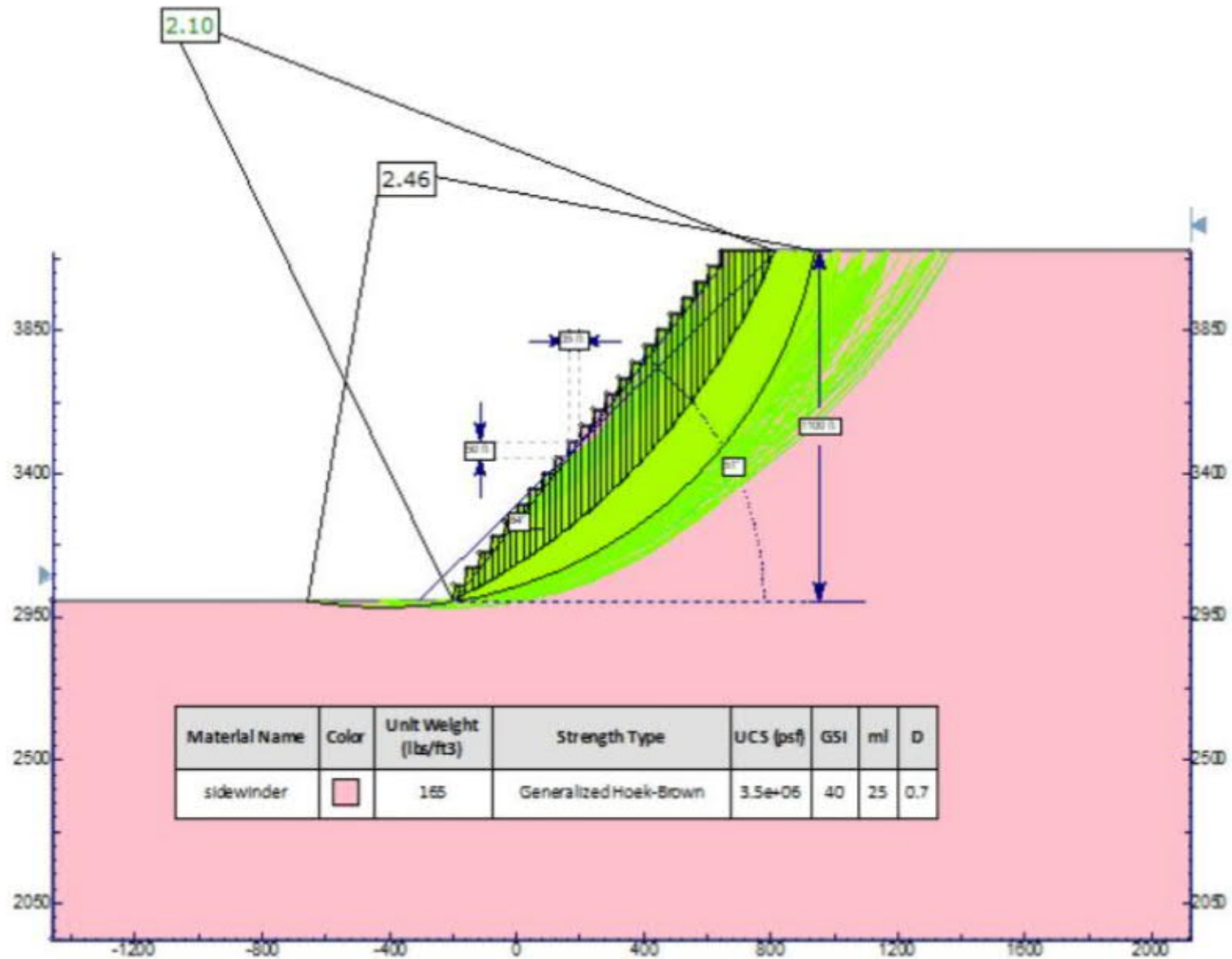
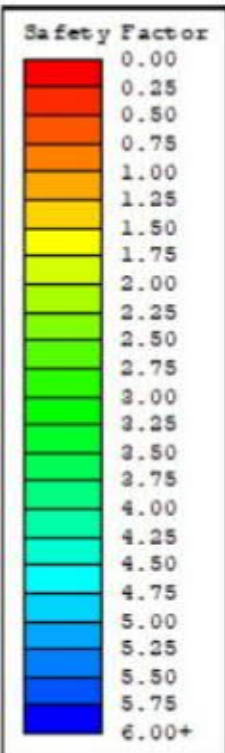
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**Terracon**

6/10/2021 10:07:40 AM

Project

Cemex Black Mtn Amended Redamation Study

Analysis Description

Scenario Slopes

Drawn By

JMc

Company

Terracon

Date

MAR 2021

File Name

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